



MARIAN CATHOLIC HIGH SCHOOL

Course Selection Booklet



This site provides you with a list of course offerings and descriptions. Prior to making any choices, students are encouraged to read carefully through the descriptions, requirements, and expectations. Your parents, teachers, and guidance counselor can help you with your choices. When making decisions, be realistic and consider your extra-curricular activities also.

Several courses have a minimum average grade requirement and certain electives must be approved by the department chairperson or a teacher. Consultation with teachers is important, especially regarding continuity of a program and level of difficulty. Marian offers honors courses to students who are above average in ability and who can achieve success in that area of study. This program stimulates creativity, research, and communication skills while expecting the student to demonstrate a personal commitment to excellence with some independent work. Students are placed in these courses by virtue of their past performances with teacher/department/administration approval. College Preparation courses are available along with requested electives, AP courses and Dual Enrollment courses for seniors. Some departments also offer basic courses. You will need teacher/department approval to be placed in this course.

PLEASE NOTE THAT THE STUDIES DIRECTOR AND DEPARTMENT CHAIRPERSONS ARE RESPONSIBLE FOR THE FINAL DECISION FOR STUDENT PLACEMENT IN A COURSE.

COURSE CHANGES:

Changes made after the return of the Course Selection Forms will require the approval of the Department Chairperson and the Studies Director. **Changes requested after rosters have been completed will incur a \$25.00 fee and will be made by appointment only.** No changes will be made after the first full cycle of

classes unless requested by the Department Chairperson in consultation with the subject teacher and parent.

GRADUATION REQUIREMENTS

Graduation from Marian Catholic High School requires the satisfactory completion of the following required courses mandated by the Commonwealth of Pennsylvania and the Diocese of Allentown.

Theology	4 units	Mathematics	3 units
English	4 units	Physical Ed/Health	1 unit
Social Studies	4 units	Humanities	2 units
Science	3 units	Electives	4 units
Required Electives	3.8 units		

FRESHMAN YEAR

Theology
English
Algebra
Biology
American Cultures
Foreign Language
Freshmen Seminar
Music Appreciation
Performing Arts
Physical Education
Research & Writing
STEM

SOPHOMORE YEAR

Theology
English
Algebra II or Geometry
Physical Science
World Cultures
Foreign Language
Drivers' Education Theory
Health
Physical Education
Standardized Test Prep Course

JUNIOR YEAR

Theology
English
Mathematics
Chemistry
20th Century America
Electives (1)
Speech Communication
Physical Education
Career & Finance Management

SENIOR YEAR

Theology
English
US Civics
Electives (3+)
Physical Education
Senior Seminar

QUALITY POINTS AND CUMULATIVE RANK (Weighted GPA)

Weighted Grade Point Average is calculated according to the level of the course and the grade earned. Cumulative rank is determined by the Quality Grade Point Average per year.

VALEDICTORIAN AND SALUTATORIAN

The Valedictorian and the Salutatorian are generally the top two students of the senior class after the third quarter grades are issued. To qualify for this honor, students must have attended Marian for three full years.

COURSE OFFERINGS **Theology Department**

Community Service Program

Since we believe that we are to live the lessons learned in Theology classes, students at Marian Catholic are required to perform varying hours of community service for the school and out into the community. This service is a graduation requirement and is performed at each grade level supervised by the Theology department.

012 CP Theology I (1 Cr.)

Grade 9

First Semester – Course 1: The Revelation of Jesus Christ in Scripture

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

Second Semester: Course 2: Who is Jesus Christ?

The purpose of this part of the course is to introduce students to the mystery of Jesus Christ, the living Word of God, the Second Person of the Blessed Trinity. In this course, students will understand that Jesus Christ is the ultimate Revelation to us from God. In learning about who He is, the students will also learn who He calls them to be.

021 H Theology II (1 Cr.)

Grade 10

022 CP Theology II (1 Cr.)

First Semester - Course 3 : The Mission of Christ - The Paschal Mystery

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

Second Semester –Course 4: Jesus Christ's Mission Continues in the Church

The purpose of this course is to help the students understand that in and through the Church they encounter the living Jesus Christ. They will be introduced to the fact that the Church was founded by Christ through the Apostles and is sustained through the Holy Spirit. The students will come to know that the Church is the living Body of Christ today. This Body has both divine and human elements. In this course, students will learn not so much about events in the life of the Church but about the sacred nature of the Church.

Honors courses will direct students to participate in self-reflection through extended writing and research.

College Prep Theology classes will share their ideas through group projects.

031 H Theology III (1 Cr.)
032 CP Theology III (1 Cr.)

Grade 11

First Semester – Course 5: Sacraments as Privileged Encounters with Jesus Christ

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

Second Semester – Course 6: Life in Jesus Christ (Morality)

The purpose of this course is to help students understand that it is only through Christ that they can fully live out God's plans for their lives. Students are to learn the moral concepts and precepts that govern the lives of Christ's disciples.

Honors courses will direct students to participate in self-reflection through extended writing and research. College Prep Theology classes will share their ideas through group projects.

041 H Theology IV (1Cr.)
042 CP Theology IV (1Cr.)

Grade 12

First Semester (Option E): Ecumenism and Interreligious Dialogue

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 to other religions of the world. Building on the foundational truth that Jesus Christ established the Catholic Church and entrusted to her the fullness of God's Revelation, the course is intended to help students recognize the ways in which important spiritual truths can also be found in non-Catholic Christian churches and ecclesial communities as well as in non-Christian religions. It is also intended to help them recognize the ways in which other systems of belief and practice differ from the Catholic faith.

Second Semester (Elective D): Responding to the Call of Jesus Christ

The purpose of this course is to help students to understand the vocations of life: How Christ calls us to live. In this course, students should learn how all vocations are similar and how they differ. The course should be structured around married life, single life, priestly life, and consecrated life. Students should learn what it means to live life for the benefit of others and the value in considering a vocation in service to the Christian community.

Honors courses will include intensive writing and discussion with individual group projects, and examination of great works of Catholic literature. The college prep class will include writing, discussion and group projects.

*Prerequisite for all Honors Theology Courses: 90 average in an Honors Theology course
or a 93 average in a College Prep Theology course*

046 Global Ethics (.5 Cr.)

Grades 11 and 12

This one-semester course engages students to develop a clear understanding of moral ethics. Through the discovery of Catholic moral principles, students will be applying them to current world issues. Class discussions are a major focus of the course as well as developing a strong moral ethic for their lives.

047 Catholic Social Teaching (.5 Cr.)**Grades 11 and 12**

This one-semester course presents the catechesis of the Church and the Body of Christ in history: its nature and meaning, images, marks, life and ministry, guide to moral life, and the role of prayer. The course will contain general knowledge of the Church's history from apostolic times to the present. Emphasis is placed on the fact that the Church was founded by Christ through the Apostles and is sustained by him throughout history through the Holy Spirit. Students will come to know that the Church is the living Body of Christ today, and has both divine and human elements.

048 Sacred Scripture (.5 Cr.)**Grades 11 and 12**

This one-semester course will introduce the basic principles for understanding and interpreting the Sacred Scripture in the Bible with emphasis on the Scripture's purpose and religious significance. Emphasis is placed on *a sense of the unity of the narrative of the divine plan of salvation, the presence of God's action in the record of his Revelation, and the desire to share his merciful love with us.*

Business Education Department

130 Career and Financial Management (.5 Cr.) Required**Grade 11**

This course will offer students an opportunity to evaluate themselves in decisions regarding life after high school. Students will evaluate the income of planned career goals and the cost of education to pursue it. This course is aligned with the National Standards for Personal Education that identifies core personal finance knowledge and skills organized into six topics: earning income, spending, investing, saving, managing credit and managing risk.

132 CP Introduction to Business via Entrepreneurship (1 Cr.)**Grades 11 and 12**

This course takes a look at starting your own business. Students will learn how to start, operate, and maintain a business encouraging creativity, innovation, critical thinking and problem solving. Areas of concentration include entrepreneurship characteristics, idea generation, forms of business ownership, budgeting and accounting, ethics, human resource management, and marketing. This class is a great start for anyone considering a business program at the post-secondary level.

134 CP Accounting I (1 Cr.)**Grades 10, 11 & 12**

The aim of this course is to provide students with an exposure to the basic skills needed to provide accounting for a sole proprietorship and corporation. Students with an interest in pursuing a career in business or accounting will be taught to record transactions in journals, post to ledgers, prepare financial statements, write and endorse checks, and prepare bank reconciliations. The calculation and recording of a company's payroll will also be covered. On-line working papers are used enabling each student to access assignments from any computer.

144 CP Accounting II (1 Cr.)**Grade 11 and 12**

This course is an extension of the principles acquired in Accounting I. It is a valuable course for the college-bound student seeking a business, financial, or accounting degree. A corporate business environment is used to teach the recording of uncollectible accounts, inventory valuation, accruals, deferrals, and depreciation of assets. Specialized journals, ledgers, and financial statements are taught using online working papers accessible from any computer.

Prerequisite: Successful completion of Accounting I

English Department

211 H English I (1 Cr.)**Grade 9**

This survey course focuses in depth on the various literary genres: novel, short story, essay, report, biography, autobiography, poetry, drama, and epic. Students learn to recognize and analyze literary elements. They read and write in persuasive, expository, descriptive, and narrative modes, distinguishing between subjective personal expression and objective accurate writing. The writing process strives to promote correctness in grammar, diction and usage. The course requires reading of a variety of literary works to supplement

knowledge and to encourage personal reading. Writing an MLA format research paper is part of the course.

212 CP English I (1 Cr.)

Grade 9

This survey course presents a variety of international selections of literary works and authors. By reading and responding to various genres of literature, including novels, short stories, essays, reports, biographies, poems, and drama, students develop an appreciation of literature and improve their oral and written communication skills. Vocabulary development, grammar, the writing process, and research skills are also stressed. Writing an MLA format research paper is part of the course.

220 Standardized Test Prep Course (STPC) (.25 Cr.)

Grade 10

This course will help students develop the skills and test taking strategies needed to prepare for standardized testing, focusing on the PSAT and SAT tests. A calculator will be required for the Math classroom days.

All sophomores are required to take this course.

221 H World Literature (1 Cr.)

Grade 10

This course is designed to engage students in the careful reading and critical analysis of literature from the 16th to the 21st centuries. Students will do close readings of works from several genres and periods to deepen their understanding of the way writers use language. Students will work to develop and organize ideas in clear, cohesive, and persuasive language. Writing a research paper is also an important part of the course. Writing an MLA format research paper is part of the course. Prerequisite- a grade of 87 in Honors English I 92 in CP English I

222 CP World Literature (1 Cr.)

Grade 10

This course includes a survey of world literature from Classical Greek literature to the 21st Century. Students are introduced to major themes reflecting man's moral, spiritual, intellectual, and emotional development. Students are required to express themselves through written and oral presentations. Vocabulary development, as well as correct grammar and usage, provide the basis for competency in writing. Skills fundamental to writing short reaction essays, technical analysis, and creative application are stressed. Writing an MLA format research paper is part of the course.

230 Speech Communication (.25 Cr.)

Grade 11

This course will stress the impact of communication on one's life and the significance of one's role as a communicator. Speech communication will help students develop their listening and speaking skills by introducing them to communication theory, a variety of public-speaking categories, and peer critiques.

231 H British Literature (1 Cr.)

Grade 11

This course includes an in-depth study of English literature from the Anglo-Saxon Period to Modern Times. Students are expected to analyze poems, prose works, and novels of English authors. Included are the study of vocabulary and grammar and their application to writing. Strong emphasis is placed on the writing process and the use of outside sources to document research. Additional assignments include reading of various novels and completion of literary projects. Writing an MLA format research paper is part of the course.

Prerequisite- a grade of 87 in Honors English II or a 92 in CP English II

232 CP British Literature (1 Cr.)

Grade 11

This course is designed to introduce students to the different types of English literature from the Anglo-Saxon Period to Modern Times. Students are guided in reading and discussing major works of this period. The writing process and its application to various types of essays are emphasized along with the rules of grammar. The study of vocabulary and the reading of novels give students a well-rounded background in English. Writing an MLA format research paper is part of the course.

241 H English IV – American Literature (1 Cr.)

(Dual Enrollment)

Grade 12

To gain further insight into American heritage and present culture, this course provides students with an in-depth chronological study of American literature from the Colonial Period to the Contemporary Period. Supplementary novels, quarterly projects, and class presentations are assigned on a regular basis to help expand vocabulary and improve comprehension. Grammar, composition, and research skills are reinforced

through detailed application of the writing process to the student's individual work. This course may be taken as Dual Enrollment with LCCC if all requirements are met. APA style research paper is part of the course. A fee is involved.

Prerequisite- a grade of 87 in Honors English III 92 in CP English III

242 CP English IV – American Literature (1 Cr.)

Grade 12

To provide further insight into American heritage and present culture, this course provides students with a chronological survey of American literature from the Colonial Period to the Contemporary Period. Supplementary novels, serving as a basis for semester projects and class presentations, are assigned for independent reading to help expand vocabulary and improve comprehension. Grammar, composition, and research skills are reinforced through an in-depth application of the writing process to the student's individual work. APA style research paper is part of the course.

251 AP English IV (1 Cr.) (Dual Enrollment)

Grade 12

This course is designed to engage motivated, disciplined students in the careful reading and critical analysis of literature from the 16th to the 20th centuries. Students will work to develop and organize ideas in clear, cohesive and persuasive writing and they are expected to be active participants in discussions in preparation for the AP exam in English Literature and composition offered in May of senior year. This course may be taken as Dual Enrollment with LCCC if all requirements are met. APA style research paper is part of the course. A fee is involved. **The College Board exacts a fee of approximately \$100 for this exam.**

Prerequisites: Qualifying grades in previous English courses, a qualifying PSAT or SAT score; Department approval.

236 CP Introduction to Journalism (.5 Cr.)

Grade 11

This one-semester course will introduce students to the interview process, newswriting (both online and print), ethics (including libel and plagiarism) photography and style books focusing on AP Style and the Catholic News Service.

246 CP Journalism/Photo-Journalism (1 Cr.)

Grade 12

This year-long course covers facets of digital yearbook production, including developing and carrying out a theme, arranging and designing layouts, writing copy, captions, and headlines, as well as perfecting photography skills to enhance the theme. Students may also work on social media, focusing on judging newsworthiness and reporting issues important to the school and student body. Participation is based on the approval of the yearbook moderator and a review of your English grades.

World Language Department

316 CP Spanish I (1 Cr.)

Grades 9

Emphasis is given to the study of basic grammar and vocabulary as learners interact and negotiate meaning in the spoken, signed, or written conversations to share information, reaction, feelings, and opinions. Students will learn to present information, concepts, and ideas to inform, explain, persuade, and narrate on a variety of topics. Acquire information and diverse perspectives in order to use the language to function in academic and career-related situations. Learners also access and evaluate information and diverse perspectives that are available through the language and its culture.

324 CP Language and Culture (1 Cr.)

Grade 10

This world language course will provide an insight for understanding the Spanish and Latin American cultures and to help to develop sensitivity toward other ways of life and viewpoints different from the students' culture. This course will emphasize Spanish culture, history, traditions, vocabulary, and geography. Minimal amount of grammar will be introduced. Several projects will be assigned in addition to tests and quizzes. The members of the department will decide enrollment in this class.

325 H Spanish II (1 Cr.)**Grades 10**

Students engage in conversations and written assignments in Spanish expressing their feelings, emotions, and exchange of ideas. Study of grammar and vocabulary is continued. Study of Hispanic culture continues with emphasis on native writers, artists, etc. The use of technology to teach the target language is enhanced.

Prerequisite: 85 in Honors Spanish I; 90 in CP Spanish I; approval of Spanish I teacher

326 CP Spanish II (1 Cr.)**Grades 10**

Students engage in conversations and express themselves on a variety of topics in Spanish. The study of grammar and vocabulary is continued. Students interpret written and spoken Spanish and use technology to develop their language skills and cultural awareness of the Hispanic world. Study of Hispanic culture continues with emphasis on native writers, artists, and geography.

335 Honors Spanish III (1 Cr.)**Grades 11 & 12**

Continued studies in Spanish language courses can be taken online virtually.

312 CP French I (1 Cr.)**Grades 11 or 12**

Emphasis is given to the study of basic grammar and vocabulary as learners interact and negotiate meaning in the spoken, signed, or written conversations to share information, reaction, feelings, and opinions. Students will learn to present information, concepts, and ideas to inform, explain, persuade, and narrate on a variety of topics. Acquire information and diverse perspectives in order to use the language to function in academic and career-related situations. Learners also access and evaluate information and diverse perspectives that are available through the language and its culture.

334 CP World Diversity (1 Cr.)**Grade 11 & 12**

This world language humanities course will provide an insight for understanding the diversity and similarities of many cultures of our world. It is intended to raise students' sensitivity towards other ways of life and awareness of viewpoints different from the students' culture. Several projects will be assigned in addition to tests and quizzes.

Mathematics Department

For all Freshmen: Placement test, standardized testing, and prior scores will determine placement in Math classes.

402 CP Algebra I (1 Cr.)**Grade 9**

This course helps students develop a solid foundation in basic algebra skills and concepts. It challenges students to develop their mathematical ability through problem solving strategies, critical thinking, and reasoning activities. Topics include real numbers, algebraic equations with one and two variables, inequalities, polynomials, relations/functions and variation, radicals, quadratic equations, an introduction to statistics and probability, and graphing linear equations. **A graphing calculator is required.**

411 H Algebra II (1 Cr.)**Grade 9**

This course is designed to help students become independent thinkers. It is an in-depth study of the concepts of equalities and inequalities, linear equations and functions, polynomials, rational expressions, complex numbers, quadratic equations, exponential and logarithmic functions, probability and statistics, and trigonometry. Students will expand their skills to prepare for higher level mathematics.

A graphing calculator is required.

412 CP Algebra II (1 Cr.)**Grades 9 or 11**

The goal of this course is to build a solid foundation of algebraic skills and concepts that can be applied in a

systematic manner to solve problems. Concepts presented include real numbers, equations, inequalities, functions and their graphs, polynomials, rational expressions, complex numbers, trigonometric functions, and probability and statistics. At the end of each section, skills are applied to concepts in the real world and related disciplines. **A graphing calculator is required.**

414 Algebra II (1 Cr.)

Grades 9

This course builds on the foundation developed in the basic algebra course. Emphasis is placed on the study of real numbers, solving equations, functions and their graphs, probability and statistics, and rational expressions. Students will solve problems analytically and support the solutions graphically. Concepts are utilized that demonstrate that algebra has a relevant connection to students' daily lives. **A graphing calculator is required.**

421 H Geometry (1 Cr.)

Grade 10

This course includes plane, coordinate, transformational, and spherical geometry with particular attention given to lines, planes, angles, polygons, circles, and geometric solids with applications of their related concepts to problem solving and real life situations. Emphasis is placed on inductive and deductive reasoning to complete proofs to develop a sequential manner of applying definitions, postulates, and theorems. **A calculator and geometer are required.** Prerequisite: 85 in Honors Algebra II; 93 in CP Algebra II; Department approval

422 CP Geometry (1 Cr.)

Grade 10

This course provides students with an exposure to plane, coordinate, transformational, and spherical geometry. Students will explore basic geometric figures focusing on the properties of sides, angles, triangles, polygons, circles, and three dimensional solids. The concepts will be applied to various disciplines and careers. Students are introduced to inductive and deductive reasoning, problem solving, geometric probability, coordinate geometry, and practical applications. **A calculator and geometer are required.**

424 Geometry (1 Cr.)

Grade 10

This course provides the student with knowledge of the basic foundations of plane geometry. Emphasis is placed on the study of basic geometric figures with definitions, theorems, transformations, problem solving strategies, and calculator activities. The concepts of perimeter, area, sides and angles as related to polygons and circles will allow students to experience real life situations in various disciplines and careers. **A calculator and geometer are required.**

220 Standardized Test Prep Course (STPC) (.25 Cr.)

Grade 10

This course, being offered by the Math and English Departments, will help students develop the skills and test taking strategies needed to prepare for standardized testing, focusing on the PSAT and SAT tests. A calculator will be required for the Math classroom days. **All sophomores are required to take this course.**

431 H Pre-Calculus (1 Cr.)

Grade 11

This course balances the algebraic, numerical, graphical, and verbal methods of representing problems and allows students to encounter ideas that foreshadow calculus. Throughout the course explorations provide students with critical thinking and problem-solving skills. This course also covers functions and graphs; polynomial, power and rational functions; exponential, logistic, and logarithmic functions; trigonometric functions; analytic trigonometry; applications of trigonometry; derivatives; and probability and statistics. **A graphing calculator is required.** Prerequisite: 85 in Honors Algebra II; 93 in CP Algebra II; Department Approval

432 CP Pre-Calculus (1 Cr.)

Grades 11 and 12

This course is designed to develop techniques to represent real world problems as mathematical models.

Students learn to communicate mathematically, improve critical thinking skills, connect and integrate mathematics in real-life situations, and use technology to enhance their understanding of mathematics. Topics include functions and graphs, probability and statistics, applications of trigonometric functions, polynomial equations, exponential and logarithmic functions. **A graphing calculator is required.** Prerequisites: successful completion of Algebra II

441 H Calculus (1 Cr.) (Dual Enrollment) Grade 12
Dual Credit offered with LCCC - LCCC requirements must be met. If taking this course for credit a fee is involved.

This challenging course brings students to an understanding of the structure of mathematics and the real number system. The course is invaluable to students who plan to major in math or science-related fields in college. The topics considered are polynomials, exponential, logarithmic, and trigonometric functions. Students also study advanced graphing, limits, derivatives, and integrals. Applications relate to the physical sciences and engineering, business, economics, and the life sciences. This course may be taken as a dual enrollment course with LCCC. Students must meet LCCC requirements to qualify. A fee is required to register at LCCC. **A graphing calculator is required.** Prerequisites: 85 in Honors Pre-Calculus; 93 in CP Pre-Calculus; Department approval

442 CP Calculus (1 Cr.) Grade 12
This course is designed to build on skills introduced in the Pre-Calculus course. The topics considered are limits, derivatives of a polynomial, rational, logarithmic and exponential functions, integrals, graphing and applications of these topics. Applications include business, economics, life sciences, and general interest. **A graphing calculator is required.** Prerequisites: successful completion of Pre-Calculus; Department approval

443 CP Advanced Mathematics Literacy (.5 Cr) Grade 12
This is a college preparatory semester course focused on building mathematics literacy across disciplines. This course explores multiple branches of higher level mathematics, including Trigonometry, Probability, and Statistics. Students who are NOT entering fields of Science or Mathematics will benefit from this course in growing mathematics literacy across various fields. The goal of this course is to deepen understanding of concepts in Probability, Statistics, and Trigonometry, as these concepts may be integrated across multiple disciplines. **A calculator is required.**

444 CP Math and Reasoning Applications (1 Cr.) Grades 11 and 12
This course includes inductive and deductive reasoning, estimation, mathematical models, problem solving, set operations, Venn Diagrams, survey problems, arguments and truth tables, number bases in positional systems and computations, Investment topics and strategies, cost of home ownership, voting methods, apportionment methods, and statistical study. **A calculator is required.** Prerequisites: successful completion of Algebra II; Department approval

445 & 446 CP Advanced Math Reasoning and Applications A & B (.5 credits each) Grade 12 This course emphasizes concepts and problem solving rather than on mathematical theory. Numerous real-life examples are included in each section. Students will model functions from real data. Word problems are solved using analytic and graphical methods. Topics include algebraic concepts, linear equations and functions, quadratics, matrices, inequalities and linear programming, exponential and logarithmic functions, probability, the mathematics of finance, and a brief calculus course.

451 AP Calculus (1 Cr.) (Dual Enrollment) Grade 12
Dual Credit offered with LCCC - LCCC requirements must be met. If taking this course for credit a fee is involved.

Senior students who have demonstrated the self-motivation necessary to succeed in challenging courses, and who have department approval are eligible for this course. Following the curriculum prescribed by the College Board, the course includes elementary functions, limits, derivatives and their applications, antiderivatives, techniques of integration, the definite integral, and applications of the integral. *Students approved for this course are required to take the AP Calculus exam.* Satisfactory grades in this exam may qualify students to

receive college credit for a semester course and to receive advanced placement in college. This course may be taken as a dual enrollment course with LCCC. Students must meet LCCC requirements to qualify. A fee is required to register at LCCC. **A graphing calculator is required. The College Board exacts a fee for the exam of approximately \$100** Prerequisite: 90% Average in Honors Pre-Calculus. A qualifying PSAT or SAT score; Department approval

453 H Introduction to Probability and Statistics (.5 Cr)

Grade 12

Dual Credit offered with LCCC - LCCC requirements must be met. If taking this course for credit a fee is involved.

This course is for students who plan to enter a profession where measurements and predictions are made. Topics include tabulation of data, measures of central tendency and dispersion, sampling, types of distribution, probability, hypothesis-testing, and elementary aspects of correlation. The course may be taken by Marian students as an elective and not for credit with LCCC. All students planning to take this course for credit must take a placement test administered by LCCC. For credit through LCCC, a student must meet the eligibility requirements set forth by Academic Services of LCCC for acceptance into the program. **A graphing calculator is required.** Prerequisites: A qualifying PSAT or SAT score; Department approval

454 CP College Algebra (.5 Cr.)

Grade 12

Dual Credit offered with LCCC - LCCC requirements must be met. If taking this course for credit a fee is involved.

This course is designed for students planning on continuing their education in a non-mathematical/non-science field. It will build on Algebra skills and include a comprehensive treatment of topics needed for the mathematics placement test for college and a basic college mathematics course required for all four-year programs. The course balances theory, application, modeling and drill, covering a wide variety of disciplines.

A graphing calculator is required. Prerequisite: Successful completion of Pre-Calculus; department approval

Science Department

511 H Biology I (1 Cr.)

Grade 9

This course is designed for the above average student and covers an in-depth sequence of topics including the diversity of life, heredity and genetics, cellular anatomy and physiology, and kingdom classification. Along with other laboratory activities, dissection of various specimens will be performed.

512 CP Biology (1 Cr.)

Grade 9

This course presents a general survey of biological topics including the diversity of life, heredity and genetics, cellular anatomy and physiology, and kingdom classification. Along with other laboratory activities, dissection of various specimens will be performed in class.

521 H Physical Science (1 Cr.)

Grade 10

This course introduces and explores many scientific principles that students will encounter in future science courses. A hands-on approach is utilized to demonstrate and explain topics involving energy, matter, motion, light and sound, as well as other topics in chemistry and physics. Students will be challenged with problem-solving techniques and critical thinking applications. Prerequisite: 90 in Honors Biology and Honors Math; 93 in CP Biology and Math; Dept. Approval

522 CP Physical Science (1 Cr.)

Grade 10

This course is an introduction to the study of matter and energy with an emphasis on everyday application of physical laws. Topics include matter, energy, motion, sound and light. Student involvement in classroom demonstrations and discussions are encouraged.

531 H Chemistry I (1 Cr.)

Grade 11

This course is designed to introduce students to the science that deals with the composition, structure, and properties of substances, and of the transformations that these substances undergo. This is a college level chemistry class with problems and labs that reflect that. Students learn the use of the metric system, basic lab

equipment and techniques, and laboratory safety methods. Prerequisites: 90 in Honors Physical Science and Honors Math; 93 in CP Physical Science and CP Math

532 CP Chemistry I (1 Cr.)

Grade 11

This course is designed to introduce students to the science that deals with the composition, structure, and properties of substances, and of the transformations that these substances undergo. Students learn the use of the metric system, basic lab equipment and techniques, and laboratory safety methods.

534 Chemistry

Grade 11

This course is designed to introduce the student to chemical principles. Students learn the theory behind chemical principles, and application of said principles. Basic math skills are required. The course concentrates on the theory as opposed to the math but some is required. Students will also learn the metric system and how to use lab equipment incorporating lab safety.

536 CP Environmental Science (0.5 cr.)

Grade 11 & 12

This course is designed for students interested in the environment and human interaction with the environment. It covers topics such as ecosystems and biome diversity.

541 H Physics (1 Cr.) (VIRTUAL)

Grade 12

First Semester - This part of the course delves into the interactions of matter and energy, from the subatomic level of quarks and leptons to the astronomical level of the Big Bang and black holes. The first part of the course focuses on the ordinary interactions seen in our everyday world, including Newton's Laws. This course examines these topics in an in-depth manner applying quantitative methods and analyzing the implications of physical forces.

Second Semester- This part of the course investigates the energy of waves and their fields, electromagnetism, nuclear reactions and subatomic physics. The course takes you into the world of the very small to see how physicists discovered that the laws that govern tiny things explain how larger masses act while making connections to the everyday world. Prerequisites: 87 in Honors Chemistry; 87 in Honors Math; 93 in CP Chemistry and Math; Department

542 CP Physics (1 Cr.) (VIRTUAL)

Grade 12

This course covers a broad knowledge base including Newtonian laws of mechanics, gravitation, vectors, basic trigonometry, forces, motion, acceleration, energy, heat, and waves. The student will keep a reflective journal in which research and investigations will be included to enrich the topics covered. The student will also have the opportunity to locate current news articles that reflect physics in everyday life as it applies to the concepts presented.

545 H Anatomy and Physiology (1 Cr.)

Grade 12

This course is designed for students interested in a medical/health related career and examines the interrelationship between human anatomy and physiology. Emphasis is placed on terminology, the study of cells and some of their processes including protein synthesis, tissues, the cardiovascular system, and the skeletal and muscular systems. Additional supplements include videoconferences of an autopsy, live knee replacement and a kidney transplant.

Prerequisites: 90 in Honors Biology; 93 in CP Biology; Teacher approval

546 CP Biology II (1 Cr.)

Grade 12

This course is designed for students interested in general biology. It is a continuation of Biology I. Topics includes all the systems of the human body and disease control. Approval of Biology I teacher is required.

547 H Organic Chemistry (1 Cr.)

Grade 12

This course, a survey course of general organic chemistry principles, will cover the nomenclature and reactions of all the major kinds of organic molecules, from Alkanes to Polymers. The last part of the course will focus on biochemistry. Prerequisites: 87 in Honors Chemistry; 93 in Regular Chemistry; approval of Chemistry I teacher

Social Studies Department

611 H American Cultures (1 Cr.)

Grade 9

This course is an in-depth evaluation of the history and development of the nation. It examines the period of early exploration, colonial times, links to and freedom from Great Britain, Sectionalism, and the Civil War and Reconstruction eras. Topics include major political, economic, social, and foreign problems that faced the United States from pre-Columbian time to the 1900's. Students are required to write short papers, participate in class discussions, evaluate printed materials characteristic of the era, and demonstrate a working knowledge of events that contribute to understanding our modern society. Emphasis is placed on critical thinking skills.

612 CP American Cultures (1 Cr.)

Grade 9

The purpose of this course is to give students an understanding of the nation's social and economic growth, the development of political equality, the Intellectual basis of American life, and sectional differences in the United States from pre-Columbian time to the 1900's. Emphasis is placed on critical thinking skills.

621 H World Cultures (1 Cr.)

Grade 10

This course is an in-depth study of the development of Western Civilization. Topics include the cultural, historical, social, and geographical backgrounds of these people and their influence on the development of Western Civilization.

Civilizations of ancient man and the effects of the Scientific, Industrial, and Social Revolutions on the development of Western Culture are discussed. Students are required to write short papers, participate in class discussions, evaluate printed materials and various media, and to evaluate current event topics for an understanding of modern society. Prerequisites: 85 in Honors American Cultures; 93 in Regular American Cultures; Department approval

622 CP World Cultures (1 Cr.)

Grade 10

This course aims to develop an understanding of the attitudes, problems, and culture of modern society. The study includes the development of the civilization of man, the formation of the first true civilization, the great cultures of ancient man and their influence on modern society, and the effect of the Scientific, Industrial, and Social Revolutions.

631 H 20th Century America and Beyond (1 Cr.)

Grade 11

This course provides students with an in-depth study of the United States in the 20th Century. Emphasis is placed on the development of the political process, involvement in World War I and II, the 20's, causes and consequences of the Depression, Korea, Vietnam, and the 60's. Independent assignments will be given throughout the year. Prerequisites: 85 in Honors World Cultures; 93 in Regular World Cultures; Department approval

632 CP 20th Century America and Beyond (1 Cr.)

Grade 11

This course provides students with an in-depth study of the United States in the 20th Century. Emphasis is placed on the development of the political process, involvement in World War I and II, the 20's, causes and consequences of the depression, Korea, Vietnam, and the 60's.

641 H U.S. Government/Civics (1 Cr.)

Grade 12

The U.S. Government/Civics Life Course will engage students in the study of four major areas of the United States, namely, the three major branches of U.S. Governmental system, Economics (including how citizens interact within microeconomics and macroeconomics), the Judicial System (include how the Nation judiciary affects courts, important case decisions and law), and Political Science focusing on how citizens and lawmakers interact through political thought and theory). A focus on current events is essential. This course will also include an in-depth research learning experience using Chicago/Turabian Citation style and format for research writing in History. *In-depth assessments and projects will be included. Two Field Experience Projects are required. Research component required.* Prerequisites: 85 in Honors 20th Century; 93 in CP 20th Century; Department approval.

642 CP U.S. Government/Civics (1 Cr.)**Grade 12**

The U.S. Government/Civics Life Course will engage students in the study of four major areas of the United States, namely, the three major branches of U.S. Governmental system, Economics (including how citizens interact within microeconomics and macroeconomics), the Judicial System (include how the Nation judiciary affects courts, important case decisions and law), and Political Science focusing on how citizens and lawmakers interact through political thought and theory). A focus on current events is essential. This course will also include a research learning experience using Chicago/Turabian Citation style and format for research writing in History. *One Field Experience Projects are required.*

651 AP Government/Politics & Economics (1 Cr.)**Grade 12**

This course will prepare students to take the AP US Government and Politics Exam. Emphasis is placed on increasing knowledge of American political culture - including key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. The course focuses on five big ideas, namely, Constitutionalism, Liberty & Order, Civic Participation in Representative Democracy, Competition Policy-Making Decisions, and Methods of Political Analysis. These topics are explored through use of concept application, SCOTUS comparison, data analysis, source analysis and argumentation. *The topic of Economics is covered as well. The College Board exacts a fee of approximately \$100 for this exam. Prerequisites: Qualifying grades in previous English courses, a qualifying PSAT or SAT score; Department approval. Prerequisites: 90 or higher in Honors 20th Century;*

636 CP Sociology (.5 Cr.)**Grades 11 and 12**

This course offers a study of the structures of society and the role they play in the way people live and act. Students will explore, discuss and analyze culture, roles in society, social norms, as well as social structures and institutions and social problems today. The class encourages participation of students through class discussion.

637 CP Introduction to Psychology (.5 Cr.)**Grades 11 and 12**

This semester course offers the scientific study of the human mind and its functions with emphasis on how they affect behavior. Psychology includes the study of human behavior, conscious memory, thought, language intelligence, personality, gender, stress and community influences. The class encourages participation of students through class discussion.

646 CP World Geography (.5 Cr.)**Grades 11 and 12**

This semester course will enable students to examine all aspects of geography, providing students with a concrete understanding of major geographic locations, world economic activities, historical and cultural aspects of societies, and an understanding of geographic tools and themes. This material will be explored using lesson presentations and the student text as well as supplemental readings, map studies, and current events.

648 CP Pennsylvania Heritage (.5 Cr.)**Grades 11 and 12**

In this course, students explore historical, geographic, economic, and political aspects of the Commonwealth of Pennsylvania and our local communities. Map skills, current events, and appreciation of Pennsylvania's role in the United States are incorporated. Materials include a textbook and supplemental information via periodicals and online resources.

649 CP History of Sports (.5 Cr.)**Grade 11 and 12**

This semester course will examine various sports at the international, national, and local levels. It will trace these sports from their origins to the present, examining successes and failures along the way. Interesting readings and research will be incorporated.

Technology Department

110 Freshmen Seminar (.25 Cr.)

Grade 9

This quarter course is designed to provide students with

- A. an understanding of Google Drive, including Docs, Sheets, Slides, Forms, and Drawings
- B. an introduction to the career planning process with Choices 360
- C. communication skills to ensure success throughout all of high school, strengthen study skills, and understand academic assistance

All freshmen are required to take this course.

246 CP Journalism/Photo-Journalism (1 Cr.)

Grade 12

This year-long course covers facets of digital yearbook, production, including developing and carrying out a theme, arranging and designing layouts, writing copy, captions, and headlines, as well as perfecting photography skills to enhance the theme. Students may also work on social media, focusing on judging newsworthiness and reporting issues important to school and student body. Participation is based on the approval of the yearbook moderator and a review of your English grades.

912 CP STEM (.25 Cr.)

Grade 9

This is a semester elective for students to be introduced to basic STEM projects working individually and collaboratively gaining "hand-on" experiences. This course is designed to enhance individual learning styles. This course may be scheduled in place of an APP – Academic Prep Period.

922 CP STEM (.5 Cr.)

Grade 10

This is a semester elective for students to be introduced to basic STEM projects working individually and collaboratively gaining "hand-on" experiences. This course is designed to enhance individual learning styles. This course may be scheduled in place of an APP – Academic Prep Period.

932 CP STEM Virtual & Robotics (.5 Cr.)

Grade 11 or 12

In this course, students will be fully engaged in in-depth projects working individually and collaboratively in a variety of STEM project experiences which focus on "hands-on" project-based learning. Through each experience, students will come to the realization of how virtually important Science, Technology, Engineering, and Math is to our world in the 21st Century. This course is designed to be a student-centered experience to enhance each learning preference and/or style. Students will lead their own learning through self-discovery and become a representative of their chosen area of STEM.

Visual and Performing Arts Department

701 Music Performance BAND and/or CHORUS

Grades 9 to 12

This course number is used to choose Concert Band and/or Chorus. Band and Chorus will be offered during the school day in a specific period that will change day to day between Chorus and Band. After the schedule is established students will be assigned course codes for the ensemble(s) they are a participant.

710 Music Appreciation (.25 Cr.)

Grade 9

Beginning with basic fundamentals, this class is designed to allow students to develop the necessary skill to listen carefully, identify the building blocks of all music, and understand how music is related to human culture today. Basic notation, instrument families, various music styles and genres, Western and non-Western music, and time periods of music will be discussed. **All freshmen are required to take this course**

712 Music Sectionals (.25 Cr.) Grades 9 to 12

This is a sectional/lesson that needs to be scheduled with the Music Director at the beginning of the school year. A certain number of meeting times and assignments need to be completed to acquire credit for this course.

715 Introduction to Performing Arts (.25 Cr.)

Grade 9

This course will provide an overview of the various disciplines within the Performing Arts. The disciplines covered will be Theatre, Dance, Music and Spoken Word as they relate to society in an historical context. The goal of the course is to give students a better understanding of the importance of performance art in the educational curriculum, discern the differences and similarities among the various performing arts disciplines, and to discover and develop an appreciation for art in everyday life. All freshmen are required to take this course.

716 Choral Music (.5 Cr.)

Grades 9 to 12

This year-long course, which focuses on proper vocal techniques, introduces students to a variety of musical styles culminating with a formal performance. Students gain a better understanding of basic sight-singing techniques, warm ups, stretches, proper singing posture, and vocal accuracy. This course has 3 concert requirements. No previous vocal experience is necessary.

718 Marching Band (.5 Cr.)

Grade 9 to 12

Starting in early August with band camp in August and ending in early November, this course allows any student the opportunity to participate in a marching band. This class meets during the Music Performance period and Tuesdays after school from 3:00 to 5:00 PM. Students who do not play an instrument will have the opportunity to participate in either the honor guard or the silk section. Students will learn to cooperate with one another and to work as a team. They will have a chance to play different styles of music and become overall better musicians.

726 Concert Band (.5 Cr.)

Grades 9 to 12

This group performs three times during the school year, at Christmas, in the spring, and at graduation. The class will help students to play as a group and to become better overall musicians. Anyone interested in playing his or her instrument is welcome.

734 CP Music in Film & Media (.5 Cr.)

Grades 11 and 12

This course is designed to help students to become aware of the role that music plays in a film and other media. Students will be expected to analyze and describe mood, style, and intention using proper industry terminology. Students will learn about the history of the music in film and the technologies used in the past as well as modern devices.

736 Music Theory (.5 Cr.)

Grades 11 and 12

This course is offered for any student who would like a better understanding of the theory behind music. The class is for both intermediate and advanced musicians. This class is intended to make the student an all-around better musician. *Department approval is needed.*

738 CP Introductory Art (.5 Cr.)

Grades 11 and 12

This semester course presents a diverse program for beginners. It combines developing basic skills and creative thinking along with two-dimensional experiences with pen and ink. As part of the course requirements the students will be responsible for the senior play scenery.

746 CP Performance Studies/Acting I (.5 Cr.)

Grades 11 and 12

In this course students will be introduced to the basic skills and techniques of acting. Students will gain hands-on application of these skills through acting out duet scenes, monologues, and ensemble work. Involvement in the fall production is encouraged.

748 CP Theatre Production (.5 Cr.)

Grades 11 and 12

This course will explore all areas of theatre production including fundamentals of producing a play from beginning to end as well as an examination of the challenges of making theatre. Students will engage in hands-on activities and will work on all technical aspects of the Spring Musical, which will include set design, costumes and props. As part of the final project students will be required to assemble a prompt book based on a one act play of their choosing.

Required Electives

815-845 Physical Education (.5 Cr. for seniors and .25 Cr. for all others)

Grade 9—12

Through a variety of indoor and outdoor games, sports, and other athletic activities, students are provided with experiences which promote physical fitness, growth, and development.

710 Music Appreciation (.25 Cr.)

Grade 9

Beginning with basic fundamentals, this class is designed to allow students to develop the necessary skill to listen carefully, identify the building blocks of all music, and understand how music is related to human culture today. Basic notation, instrument families, various music styles and genres, Western and non-Western music, and time periods of music will be discussed.

715 Introduction to Performing Arts (.25 Cr.)

Grade 9

This course will provide an overview of the various disciplines within the Performing Arts. The disciplines covered will be Theatre, Dance, Music and Spoken Word as they relate to society in an historical context. The goal of the course is to give students a better understanding of the importance of performance art in the educational curriculum, discern the differences and similarities among the various performing arts disciplines, and to discover and develop an appreciation for art in everyday life.

220 Standardized Test Prep Course (STPC) (.25 Cr.)

Grade 10

This course will help students develop the skills and test taking strategies needed to prepare for standardized testing, focusing on the PSAT and SAT tests. A calculator will be required for the Math classroom days.

820 Drivers' Education Theory (.25 Cr.)

Grade 10

This course consists of 30 hours of classroom theory according to the PA Dept. of Ed. The content will provide students with the knowledge and skills that should enable them to become safe and informed members of the Highway Transportation System. The attainment of this expectation will allow students to safely use this system with greater confidence and higher skill levels. Students will receive a certificate of participation if they meet the classroom requirements.

823 Health (Boys) (.25 Cr.) 824 Health (Girls) (.25 Cr.)

Grade 10

This course covers the topics of general health, mental health, stress, stages within our life cycle, the reproductive system, communicable diseases with an emphasis on sexually transmitted diseases, nutrition, tobacco, alcohol, and illegal drugs.

230 Speech Communication (.25 Cr.)

Grade 11

This course will stress the impact of communication on one's life and the significance of one's role as a communicator. Speech communication will help students develop their listening and speaking skills by introducing them to communication theory, a variety of public-speaking categories, and peer critiques.

130 Career and Financial Management (.5 Cr.)

Grade 11

This course will offer students an opportunity to evaluate themselves in decisions regarding life after high school. Students will evaluate the income of planned career goals and the cost of education to pursue it. This course is aligned with the National Standards for Personal Education that identifies core personal finance knowledge and skills organized into six topics: earning income, spending, investing, saving, managing credit and managing risk.

General Electives

Full Year Electives

132 CP Introduction to Business via Entrepreneurship (1 Cr.)

Grades 11 and 12

This course takes a look at starting your own business. Students will learn how to start, operate, and maintain a business encouraging creativity, innovation, critical thinking and problem solving. Areas of concentration include entrepreneurship characteristics, idea generation, forms of business ownership, budgeting and accounting, ethics, human resource management, and marketing. This class is a great start for anyone considering a business program at the post-secondary level.

134 CP Accounting I (1 Cr.)

Grades 10, 11 or 12

The aim of this course is to provide students with an exposure to the basic skills needed to provide accounting for a sole proprietorship and corporation. Students with an interest in pursuing a career in business or accounting will be taught to record transactions in journals, post to ledgers, prepare financial statements, write and endorse checks, and prepare bank reconciliations. The calculation and recording of a company's payroll will also be covered. On-line working papers are used enabling each student to access assignments from any computer.

144 CP Accounting II (1 Cr.)

Grade 11 or 12

This course is an extension of the principles acquired in Accounting I. It is a valuable course for the college-bound student seeking a business, financial, or accounting degree. A corporate business environment is used to teach the recording of uncollectible accounts, inventory valuation, accruals, deferrals, and depreciation of assets. Specialized journals, ledgers, and financial statements are taught using working papers accessible from any computer. *Prerequisite: Successful completion of Accounting I*

246 CP Journalism/Photo-Journalism (1 Cr.)

Grade 12

This Journalism/Photo-Journalism course is a full year course that will create the monthly Blue and Gold Insider, the Yearbook, and Student Column for the local newspaper while generating updates for Marian social media. Students will be introduced to the evolving balance between print and online news and ways they can complement each other to report different kinds of news and stories.

312 CP French I (1 Cr.)

Grades 11 or 12

Emphasis is given to the study of basic grammar and vocabulary as learners interact and negotiate meaning in the spoken, signed, or written conversations to share information, reaction, feelings, and opinions. Students will learn to present information, concepts, and ideas to inform, explain, persuade, and narrate on a variety of topics. Acquire information and diverse perspectives in order to use the language to function in academic and career-related situations. Learners also access and evaluate information and diverse perspectives that are available through the language and its culture.

334 CP World Diversity (1 Cr.)

Grade 11 & 12

This world language humanities course will provide an insight for understanding the diversity and similarities of many cultures of our world. It is intended to raise students' sensitivity towards other ways of life and awareness of viewpoints different from the students' culture. Several projects will be assigned in addition to tests and quizzes.

441 H Calculus (1 Cr.)

Dual Enrollment

Grade 12

This challenging course brings students to an understanding of the structure of mathematics and the real number system. The course is invaluable to students who plan to major in math or science-related fields in college. The topics considered are polynomials, exponential, logarithmic, and trigonometric functions. Students also study advanced graphing, limits, derivatives, and integrals. Applications relate to the physical sciences and engineering, business, economics, and the life sciences. **A graphing calculator is required.** *Prerequisites: 85 in Honors Pre-Calculus; 93 in CP Pre-Calculus; Department approval*

442 CP Calculus (1 Cr.)

Grade 12

This course is designed to build on skills introduced in the Pre-Calculus course. The topics considered are limits, derivatives of a polynomial, rational, logarithmic and exponential functions, integrals, graphing and applications of these topics. Applications include business, economics, life sciences, and general interest. **A graphing calculator is required.** Prerequisites: successful completion of Pre-Calculus; Department approval

444 CP Math and Reasoning Applications (1 Cr.)

Grades 11 or 12

This course includes inductive and deductive reasoning, estimation, mathematical models, problem solving, set operations, Venn Diagrams, survey problems, arguments and truth tables, number bases in positional systems and computations, Investment topics and strategies, cost of home ownership, voting methods, apportionment methods, and statistical study. **A calculator is required.** Prerequisites: successful completion of Algebra II; Department approval

451 AP Calculus (1 Cr.) Dual Enrollment

Grade 12

Senior students who have demonstrated the self-motivation necessary to succeed in challenging courses, and who have department approval are eligible for this course. Following the curriculum prescribed by the College Board, the course includes elementary functions, limits, derivatives and their applications, antiderivatives, techniques of integration, the definite integral, and applications of the integral. *Students approved for this course are required to take the AP Calculus exam.* Satisfactory grades in this exam may qualify students to receive college credit for a semester course and to receive advanced placement in college. **A graphing calculator is required. The College Board exacts a fee for the exam of approximately \$100.** Prerequisite: A qualifying PSAT or SAT score; Department approval

541 H Physics (1 Cr.) Virtual

Grade 12

This course delves into the interactions of matter and energy, from the subatomic level of quarks and leptons to the astronomical level of the Big Bang and black holes. The first part of the course focuses on the ordinary interactions seen in our everyday world, including Newton's Laws. This course examines these topics in an in-depth manner applying quantitative methods and analyzing the implications of physical forces. In addition, the course investigates the energy of waves and their fields, electromagnetism, nuclear reactions and subatomic physics. The course takes you into the world of the very small to see how physicists discovered that the laws that govern tiny things explain how larger masses act while making connections to the everyday world. Prerequisites: 87 in Honors Chemistry; 87 in Honors Math; 93 in Regular Chemistry and Math; Department approval

542 CP Physics (1 Cr.) Virtual

Grade 12

This course covers a broad knowledge base including Newtonian laws of mechanics, gravitation, vectors, basic trigonometry, forces, motion, acceleration, energy, heat, and waves. The student will keep a reflective journal in which research and investigations will be included to enrich the topics covered. The student will also have the opportunity to locate current news articles that reflect physics in everyday life as it applies to the concepts presented.

545 H Anatomy and Physiology (1 Cr.)

Grade 12

This course is designed for students interested in a medical/health related career and examines the interrelationship between human anatomy and physiology. Emphasis is placed on terminology, the study of cells and some of their processes including protein synthesis, tissues, the cardiovascular system, and the skeletal and muscular systems. Additional supplements include videoconferences of an autopsy, live knee replacement and a kidney transplant.

Prerequisites: 90 in Honors Biology; 93 in CP Biology; Teacher approval

546 CP Biology II (1 Cr.)

Grade 12

This course is designed for students interested in general biology; it is a continuation of Biology I. Topics include all the systems of the human body and disease control. Approval of Biology I teacher is required.

547 H Organic Chemistry (1 Cr.)**Grade 12**

This course, a survey course of general organic chemistry principles, will cover the nomenclature and reactions of all the major kinds of organic molecules, from Alkanes to Polymers. The last part of the course will focus on biochemistry.

Prerequisites: 87 in Honors Chemistry; 93 in Regular Chemistry; approval of Chemistry I teacher

General Electives

Semester Electives

046 Global Ethics (.5 Cr.)**Grades 10, 11 & 12**

This one-semester course engages students to develop a clear understanding of moral ethics. Through the discovery of Catholic moral principles, students will be applying them to current world issues. Class discussions are a major focus of the course as well as developing a strong moral ethic for their lives.

047 Catholic Social Teaching (.5 Cr.)**Grades 11 and 12**

This one-semester course presents the catechesis of the Church and the Body of Christ in history: its nature and meaning, images, marks, life and ministry, guide to moral life, and the role of prayer. The course will contain general knowledge of the Church's history from apostolic times to the present. Emphasis is placed on the fact that the Church was founded by Christ through the Apostles and is sustained by him throughout history through the Holy Spirit. Students will come to know that the Church is the living Body of Christ today, and has both divine and human elements.

048 Sacred Scripture (.5 Cr.)**Grades 11 and 12**

This one-semester course will introduce the basic principles for understanding and interpreting the Sacred Scripture in the Bible with emphasis on the Scripture's purpose and religious significance. Emphasis is placed on *a sense of the unity of the narrative of the divine plan of salvation, the presence of God's action in the record of his Revelation, and the desire to share his merciful love with us.*

236 CP Introduction to Journalism (.5 Cr.)**Grade 11**

This course will introduce students to the interview process, newswriting (both online and print), ethics (including libel and plagiarism) photography and stylebooks. This course is a prerequisite for Journalism/Photo-Journalism.

443 CP Advanced Mathematics Literacy (.5 Cr)**Grade 11 and 12**

This is a college preparatory semester course focused on building mathematics literacy across disciplines. This course explores multiple branches of higher level mathematics, including Trigonometry, Probability, and Statistics. Students who are NOT entering fields of Science or Mathematics will benefit from this course in growing mathematics literacy across various fields. The goal of this course is to deepen understanding of concepts in Probability, Statistics, and Trigonometry, as these concepts may be integrated across multiple disciplines. **A calculator is required.**

453 H Introduction to Probability and Statistics (.5 Cr)**Grade 12**

Dual Credit offered with LCCC - LCCC requirements must be met. If taking this course for credit a fee is involved.

This course is for students who plan to enter a profession where measurements and predictions are made.

Topics include tabulation of data, measures of central tendency and dispersion, sampling, types of distribution, probability, hypothesis-testing, and elementary aspects of correlation. The course may be taken by Marian students as an elective if a student does not want LCCC credit(s). All students planning to take this course for credit must take a placement test administered by LCCC. For credit through LCCC, a student must meet the eligibility requirements set forth by Academic Services of LCCC for acceptance into the program. **A graphing calculator is required.** *Prerequisites: A qualifying PSAT or SAT score; Department approval*

454 CP College Algebra (.5 Cr.)

Grade 12

Dual Credit offered with LCCC - LCCC requirements must be met. If taking this course for credit a fee is involved.

This course is designed for students planning on continuing their education in a non-mathematical/non-science field. It will build on Algebra skills and include a comprehensive treatment of topics needed for the mathematics placement test for college and a basic college mathematics course required for all four-year programs. The course balances theory with practical application and computation. The course may be taken by Marian students as an elective if a student does not want LCCC credit(s). All students planning to take this course for credit must take a placement test administered by LCCC. For credit through LCCC, a student must meet the eligibility requirements set forth by Academic Services of LCCC for acceptance into the program. **A graphing calculator is required.** *Prerequisites: A qualifying PSAT or SAT score; Department approval*

536 CP Environmental Science (0.5 cr.)

Grade 11 & 12

This course is designed for students interested in the environment and human interaction with the environment. It covers topics such as ecosystems and biome diversity.

636 CP Sociology (.5 Cr.)

Grades 11 and 12

This course offers a study of the structures of society and the role they play in the way people live and act. Students will explore, discuss and analyze culture, roles in society, social norms, as well as social structures and institutions and social problems today. The class encourages participation of students through class discussion.

637 CP Introduction to Psychology (.5 Cr.)

Grades 12

This semester course offers the scientific study of the human mind and its functions with emphasis on how they affect behavior. Psychology includes the study of human behavior, conscious memory, thought, language intelligence, personality, gender, stress and community influences. The class encourages participation of students through class discussion.

646 CP World Geography (.5 Cr.)

Grades 10, 11 & 12

This semester course will enable students to examine all aspects of geography, providing students with a concrete understanding of major geographic locations, world economic activities, historical and cultural aspects of societies, and an understanding of geographic tools and themes. This material will be explored using lesson presentations and the student text as well as supplemental readings, map studies, and current events.

648 PA Heritage

Grades 10, 11 & 12

In this course, students explore historical, geographic, economic, and political aspects of the Commonwealth of Pennsylvania and our local communities. Map skills, current events, and appreciation of Pennsylvania's role in the United States are incorporated. Materials include textbook and supplemental information via periodicals and online resources.

649 CP History of Sports (.5 Cr.)

Grade 10, 11 & 12

This semester course will examine various sports at the international, national, and local levels. It will trace these sports from their origins to the present, examining successes and failures along the way. Interesting readings and research will be incorporated.

734 CP Music in Film & Media (.5)**Grades 10, 11 & 12**

This course is designed to help students to become aware of the role that music plays in a film and other media. Students will be expected to analyze and describe mood, style, and intention using proper industry terminology. Students will learn about the history of the music in film and the technologies used in the past as well as modern devices.

736 Music Theory (.5 Cr.)**Grades 11 and 12**

This course is offered for any student who would like a better understanding of the theory behind music. The class is for both intermediate and advanced musicians. This class is intended to make the student an all-around better musician. *Department approval is needed.*

738 CP Introductory Art (.5 Cr.)**Grades 10, 11 & 12**

This semester course presents a diverse program for beginners. It combines developing basic skills and creative thinking along with two-dimensional experiences with pen and ink, charcoal, and tempera painting. As part of the course requirements the students will be responsible for the senior play scenery.

848 CP Domestic Science (0.5 cr.)**Grade 12**

This course provides students with real world skills needed to survive independently in a future dorm or apartment. Skills include cleaning, cooking, doing laundry, and making small home repairs.

922 CP STEM (.5)**Grade 9 and 10**

This is a semester elective for students to be introduced to basic STEM projects working individually and collaboratively gaining "hand-on" experiences. This course is designed to enhance individual learning styles. This course may be scheduled in place of an APP – Academic Prep Period.

932 CP STEM Virtual & Robotics (.5 Cr.)**Grade 11 or 12**

In this course, students will be fully engaged in in-depth projects working individually and collaboratively in a variety of STEM project experiences which focus on "hands-on" project-based learning. Through each experience, students will come to the realization of how virtually important Science, Technology, Engineering, and Math is to our world in the 21st Century. This course is designed to be a student-centered experience to enhance each learning preference and/or style. Students will lead their own learning through self-discovery and become a representative of their chosen area of STEM.

Vocational- Technical School Information

The Vocational-Technical School is an extension of Marian Catholic High School for students in Schuylkill County or Hazleton School District. Students from Carbon County cannot participate in the Vo-Tech program. Disenrollment from Marian High School is necessary in order to enroll in the Public School. The Carbon County Career and Technical Institute is a comprehensive high school within itself.

The various programs offered are an integral part of the curriculum of Marian. Students who take the vocational-technical program continue to take their required academic subjects and physical education at Marian during one half of the school day and attend the Vocational-Technical School the other half day for their specialized program, with the exception of Schuylkill Co-Tech which is one half year over a full term.

Diplomas awarded at graduation are given only by Marian Catholic High School. The Vocational-Technical School does present a certificate to each graduate who has successfully met their standards. This certificate describes, for any future employer, the type and amount of instruction received by the student while enrolled at the Vocational-Technical School.

All Vo-Tech students must arrange their schedules with assistance from The Studies Director and the Guidance Counselor. Vo-Tech students are responsible for their transportation to and from Marian.