

Academic Course Catalog

Catholic
Memorial
School



MISSION STATEMENT Catholic Memorial is an academic faith community for young men in grades 7-12. We endeavor to instill in our students a mature commitment to the demands of Catholic Christian witness and a lifelong love of learning. Catholic Memorial serves a range of socioeconomic backgrounds and academic abilities. We embrace the diversity of the neighborhoods and surrounding towns of Boston by providing young men with a challenging college preparatory experience rooted in Gospel values. We want our students to explore their academic, athletic, creative, and spiritual potential as educated gentlemen and citizens. And we want their faith and ideals to find expression in service to God, neighbor, and the Church. With a dedicated faculty, staff, and supportive parents we create within our program an ethic of caring for the needs of each student. In keeping with the tradition of Blessed Edmund Ignatius Rice and the Congregation of Christian Brothers, we foster a passion for social justice and respect for the dignity of those treated least, lost, and last.

THE ACADEMIC PROGRAM Catholic Memorial offers a rigorous, college preparatory program for grades 7 through 12 that is fully accredited by the New England Association of Schools and Colleges. Upon graduation, our students consistently go on to attend some of the finest colleges and universities in the nation. Our school program offers an Honors/Advanced Placement curriculum in addition to a challenging college preparatory program. In order for a student to graduate from the high school program, he must earn a minimum of twenty six and one quarter credits. Each high school student is required to take four credits of Theology, four credits of English, three credits of Social Studies, three credits of Mathematics, three credits of Science, three credits of World Language, one half-credit of Computer Science, one half-credit of Fine Arts one half-credit of Health, and three years of Physical Education (the equivalent of three quarter credits). **ADVANCED PLACEMENT POLICY** Given the highly competitive nature of Honors and Advanced Placement courses, the Vice Principal and Area Coordinators will rank rising sophomores, juniors, and seniors based on first semester grade point averages to determine admission to these courses. Students who possess the highest ranking numbers will be offered placement in corresponding Advanced Placement courses. When the Advanced Placement section or sections are filled, the remaining students will be offered placement in Honors level courses depending upon student ranking and space availability. During the selection process, if a student is offered an Advanced Placement class and chooses not to take it, he may move to the Honors level and an Honors student, the next on the list, may move to Advanced Placement. However, once registration closes, no changes may occur. Students who later decide to opt out of Advanced Placement courses will move to regular sections to help ensure the integrity of the Honors program.

Administration President.....Mr. Paul Sheff, '62
 Principal.....Mr. Richard Chisholm
 Vice Principal of Academic Affairs..... Dr. James Keane, '82
 Vice Principal of Student Affairs.....Mr. Brian Scott
 Head Teacher Middle School.....Mr. Donald Cormier

Academic Area Coordinators:

Mathematics..... Mr. Thomas Beatty
 Social Studies Dr. Michael Dempsey
 EnglishMr. Vincent Catano
 Science Br. Kirk Phelps, C.F.C.
 Theology Mr. Andrew Melionek
 World Languages..... Mrs. Margaret Sittig
 Fine Arts Mr. Craig Spaner

Student Services

Library Services.....Ms. Ann Magyar
 Health Services Mrs. Anne Marie Bosse

Campus Ministry

Director..... Mrs. Leah Ramsdell
 Campus Minister.....Miss Kathryn Boyle
 Senior Service Coordinator..... Mr. Andrew Melionek
 Student Activities Coordinator/
 BERSI Director Mr. Patrick Murray

Guidance Staff

Director Mr. Robert Tegan
 CounselorMs. Mary Concannon
 Counselor Mr. William Hanson
 Counselor Dr. Cornelius Holland
 School Psychological Services.....Dr. Deborah Margolis

Theology

Theology is reflection upon God that presupposes participation in a community of faith. At CM, students are introduced to the central tenets of Roman Catholicism through a program of instruction that integrates spirituality, Scripture, morality, historical, and systematic theology. At CM, we aim to create an atmosphere where students can continually develop their faith, grow in the experience of Christian living, and prepare to take an active role in the total Christian community. The curriculum in grades 9 and 10 is intended to give a thorough and solid Christian foundation to each student. It is wide in scope and intense in instruction. It makes no assumptions about elementary catechesis, but instead begins with, builds upon, and intensifies the foundation of faith through the study of Sacred Scripture and the Documents of Vatican II. In grades 11 and 12, students use this foundation to examine issues which affect their personal lives and the whole world community.

3 Theology 7 The Story of Jesus (607)

Seventh grade theology is an introduction to Catholic Christianity with a focus on the life and teachings of Jesus Christ and the sacramental celebration of his ministry. The course also includes an introduction to Edmund Ignatius Rice and the Christian Brothers, giving students an understanding of the identity and mission of the school. Prayer and analysis of the specific sacraments are also included in the curriculum. The goal is to develop a strong foundation in both the Catholic faith and the history and traditions of the Congregation of Christian Brothers.

the history of the Roman Catholic Church and its place in the world from Pentecost to the present day. The course explores the early church and Eucharistic celebration in private homes. It then covers the growth and development of the church through people like Paul through his missionary journeys and through the saints. The struggle to maintain the faith through Roman persecution, the growth of the Church in the western world, Constantine, and the crusades are all covered leading the students to the present day Church. Students are also introduced to Catholic ethics and morality, including one's responsibility a member of the Catholic community today.

Theology 8- The History of the Catholic Church (608)

Theology 8 seeks to develop a strong foundation in the Catholic faith as well as the history and traditions of the Roman Catholic Church. Students work towards a basic understanding of

Theology 9 (012)-- Understanding Catholic Christianity

Understanding Catholic Christianity is an introductory course for studying Catholic Christianity with spe-

cific focus on the human person. The course begins within the context of the Judeo-Christian tradition, with particular emphasis placed upon God's covenantal relationship with the human race. Jesus' teachings, the messianic hope in the person of Jesus, Catholic Sacraments and monotheistic faiths are explored throughout the year. Students are expected to participate in class discussions, exchange ideas, and evaluate their own faith lives on a consistent basis. The ultimate goal for students is a constant striving and holistic growth, as designated in Catholic Memorial's Mission Statement. Previous experience with Catholic Christianity may be helpful, but is not required, since the purpose of the course is to bring students from various backgrounds and beliefs to an understanding of the faith that will enable them to develop their knowledge further and to prepare them for their future years of study.

Theology 10 (022) -- Introduction to Scripture

Introduction to Scripture is divided into two semesters. The first semester will look at what Christians call the "Old Testament" in order to understand and appreciate these texts as products of real people in particular religious, historical, social, mythical, theological, ideological, economic, and political contexts. Course analysis will attempt to understand the development of Judaism and the foundations of what would later become Christianity by uncovering how the people of Israel interpreted their experiences of God, so that students can understand their own experiences and the human condition. The second semester will introduce

Christian literature by attempting to understand how the early church witnessed, understood, and expressed faith and theology in its own particular cultural context. Like the Israelites, this literature is a product and reflection of human responses to real situations and our goal will be to critically understand those situations and evaluate the Church's responses. Students will understand both the Jewish and the Greek contexts out of which Christianity was born: tensions in the early church, the role of women, economic issues, the problems of anti-Semitism in the Gospels, and the influence of the Roman Empire. In order to accomplish this, students will have to learn how to interpret ancient texts while understanding their own modern biases and perspectives. They will also learn how to inform their own understanding of faith in order to grow and respond to situations in their own world.

Theology 11 (032) -- Foundations of Moral Theology

This course deals with Christian morality through the appropriation of basic moral principles and the need to witness those principles to others. This course makes extensive use of open-ended case studies and discussion. It stresses that Christian morality does not mean knowing all the right answers, but rather believing in and acting upon a set of values. The ultimate goal of this course is the utilization of an intelligent decision-making process in moral matters based upon education, clarification, and conviction. Extensive reading is required as well as a paper or project each semester.

Leadership and Service (035)

This eleventh grade Theology course grounds students in Catholic ethics and provides a systematic approach to solving moral problems and forming conscience. Using Catholic morality as the foundation, students are challenged to respond creatively to contemporary issues facing the school and the greater community.

Catholic Leadership in a Global Marketplace (035)

This twelfth grade Theology course explores effective servant leadership in a global marketplace. Building on Leadership and Service, students will explore the Catholic foundations of social justice teaching and examine servant leadership in relation to other leadership models. Particular emphasis will be placed on the relationship between religion and public policy, the role of the church in the modern world, and the student's individual capacity to produce lasting change. Participation in the senior service project is a central component to the course.

Theology 12 (045) Seniors -- Modern Day Saints and Prophets in an Unjust World

Modern Day Saints and Prophets in an Unjust World examines systematic

oppression and our role as humans to expose and transcend those systems towards the creation of a just society. The course is designed thematically and from the position of Catholic social teachings. Students will also be introduced to systematic theology through the writings of leading Catholic theologians like Bernard Lonergan and Karl Rahner in order to help students see the theology embedded in the everyday and to help them think logically about very complex issues. Topics include economic systems, religious freedom, war, education, discrimination, and gender as well as discussions about identity formation, citizenship and social responsibility, and the role of culture in social transformation. The primary purpose of the course is to allow students to critically reflect on both the basic ethical questions facing the world today and on those individuals who acted upon their faith to influence the world around them. Students will understand the structural components of injustice and their own place within those structures, while understanding themselves as active history makers, not bystanders. They will also be challenged to build God's Kingdom and the faith community through their participation in the Senior Service Program.

English

English helps to develop the communication skills necessary for everyday life while simultaneously raising consciousness about the world, its problems, its ethics, and its potentialities. English should lead a student to discover the profound importance of language and critical thinking through the three major areas of the discipline: language, literature, and composition.

English 9 (112)

Using “World Literature” as its theme, the ninth grade English program offers initial exposure to the areas essential to producing a literate graduate. A review of grammar and a firm foundation in language mechanics, usage, and sentence structure are part of the English core curriculum. A well-constructed paragraph and essay are the goals of the writing unit. Correlation between grammar exercises and writing assignments is stressed. Vocabulary development and usage are developed through “word attack” exercises and drills. A literary component emphasizes the genres of the short story, the play, and the novel. An introduction to the nature of poetry is also begun. A library orientation, acquainting students with the on-line resources available to them, completes this freshman course.

Language Skills 9 (150)

Recognizing the disparate academic backgrounds of some of our students, Language Skills offers a fundamental course in grammar and writing that complements the English 9 course. Language Skills is designed for the student who needs strengthening in grammar, reading, writing, vocabulary, and overall study skills. Intensive grammar work provides drills and exercises to promote

correct usage when writing. Proper paragraph structure and development are also emphasized. Vocabulary is drilled through workbook exercises. Study skills are stressed throughout the year in all assignments.

English 9 Honors (114)

This first year accelerated English program establishes a strong foundation in both effective composition and literary analysis. Students are exposed to the major literary genres: the short story, the novel, the poem, the play, and the essay. Written instruction focuses on the writing process, beginning with prewriting exercises and continuing through several revisions to produce a creative, well constructed composition. Throughout the year, students build vocabulary by studying new words in context. The curriculum also includes a thorough review of the rules of grammar and word usage.

English 10 (122)

This course is a thematic study of British literature covering all genres: the short story, the poem, the play, and the novel. A traditional foundation in grammar and writing is essential to this course. Grammar begins with parts of speech and concludes with types of clauses and sentences. Solid essay struc-

ture formulates the basis of the writing unit. Vocabulary development continues to build upon the previous year’s work. In addition, each student must produce a wellresearched, typed, final paper of six to eight pages in length.

English 10 Honors (124)

The second year English program continues the work of the English 9 Honors course at the most challenging level. The literature focus centers exclusively upon British authors with a chronological approach. Writing assignments include personal narratives and literatureinspired topics. Grammar lessons remediate problem areas evidenced in student writing samples. Vocabulary development continues in context. Each student must produce a wellresearched, typed, final paper of six to eight pages in length in accordance with Modern Language Association guidelines.

Introduction To Public Speaking (126)

Offered to sophomores as an option in lieu of Health, this class meets twice a week and receives one half-credit. Introduction to Public Speaking will be an interactive course that emphasizes both writing and research skills while exposing students to important public speaking techniques. In this course, students learn to gather, cite, and outline information and communicate it persuasively in a public setting.

English 11 (132)

This course focuses on the thematic study of American literature. It pro-

vides a firm foundation in grammar and writing skills. Furthermore, the process and form of writing a research paper according to Modern Language Association format is a prime goal. Vocabulary development for the college-bound student is another objective. An intensive preparation for the Preliminary Scholastic Aptitude Test (PSAT) and the Scholastic Aptitude Test (SAT) are integral parts of the course content. In addition, each student must produce a well-researched, typed, final paper of ten or more pages in length in accordance with Modern Language Association guidelines.

English 11 Honors (134)

This course offers an advanced program in the study of American literature and composition while emphasizing the development of literary analysis techniques and writing skills. Grammar is studied in conjunction with writing assignments. For example, a Grammar Handbook is used which targets particular grammatical problem areas with each writing assignment. Vocabulary development is also an integral part of the course with PSAT review and SAT preparation as primary goals. In addition, each student must produce a well-researched, typed, final paper of ten or more pages in length following Modern Language Association guidelines.

College Writing (135)

This full year elective course offers alternate semesters focusing on analytical and creative writing. This elective course does not fulfill a student’s requirement in English. It is intended to supplement work done in

previous English courses. The course is, therefore, writing intensive, focusing upon the writing process, particularly drafting, revising, peer editing, and analytical thinking designed to mimic the type of writing assignments a student would encounter in his first year of college. All students will be required to complete a research paper in order to receive full credit for the course. Students will also be required to submit a series of unified compositions that demonstrate proficiency in various styles and forms of writing.

English 12 (142)

This course completes a four-year program in the study of composition and literature. The focus of this course is literary analysis, writing skills, grammar, and further vocabulary development. Students are required to analyze major works in American and British literature. This literature forms the basis for writing assignments. Because the ultimate objective of the course is to prepare students for future college success, each student is required to produce a well-researched, typed, final paper of 15-20 pages in length following Modern Language Association guidelines.

English 12 Honors (143)

This course completes a four-year, accelerated program in the study of com-

position and literature. The focus of this accelerated course is on literary analysis and writing skills. Students are required to analyze major works in all genres of world literature. Writing assignments are designed to structure writing ability toward the objectives of an organized theme. In addition, students are required to produce a well-researched, typed, final paper of 15-20 pages in length following Modern Language Association guidelines.

Advanced Placement English (144)

This rigorous course is designed for the highly self-motivated student. Students in this course should have previously demonstrated a mastery of writing and literature. This course will focus on a critical analysis of all genres of world literature. Organized themes will be used to create writing assignments that thoroughly challenge student ability. To successfully complete this course, students must take the nationally administered Advanced Placement English examination in Literature and Composition. Students who perform well on this exam will receive college credit. Lastly, each student is required to produce a well-researched, typed, final paper of 15-20 pages in length following Modern Language Association guidelines.

Social Studies

The Social Studies program is comprised of a selection of courses which enable students to achieve a background in the social sciences. The aim is to promote skills in citizenship that will serve as a proper foundation for college majors in the area of social studies. Courses concentrate on developing an awareness of action in an historical, social perspective. Emphasis is placed upon resource and outside assignments. By challenging our students with thought provoking questions, we hope to cultivate independent, critical thinking and a strong sense of social justice.

Introduction to Geography (627)

This 7th grade course introduces students to a comprehensive study of geography as a foundation for understanding contemporary problems and issues and the relationship between geography to culture. In-depth studies of primitive, agrarian, industrial, and post-industrial societies afford students an opportunity to examine representative cultures and societies.

Introduction to Civics (628)

This 8th grade course concentrates on the study of civics. Study of federal, state, and local governments is tied to an appreciation of American history with emphasis on the theme of “conflict and resolution.” Other themes focus on citizenship, the “separation of powers,” and the role of the individual in society.

Global Studies 9 (215)

This course will focus on Africa, South Asia, East Asia and Latin America. The course will also examine Western Europe, the countries that formerly made up the Soviet Union, Eastern Europe and the Middle East. Each area will be developed around the following topics: geographic/historical setting, the dynamics of change, contemporary nations and cultures, economic development, and global context.

Global Studies 9 Honors (219)

This advanced course will focus on the Third World: Africa, South Asia, East Asia and Latin America. It will also examine Western Europe’s new geo-political boundaries since the fall of the Soviet Union. The course concludes with a study of Eastern Europe and the Middle East. Throughout the course, students will be constantly asked to compare and contrast conditions in these countries to those of the Western World using critical thinking skills developed during the year. Dynamics that bring about new social orders will also be discussed. The course textbook will be supplemented with extensive outside reading and resource work.

Western Civilization 10 (222)

This course offers a survey of Western civilization from the earliest days in the Near East through the period of the Renaissance. Emphasis is placed upon Greece, the Hellenistic Age, Rome, and Europe into the Middle Ages. A chronological approach is used stressing political, diplomatic, economic, and social trends. Students do a considerable amount of writing in homework assignments, papers, and on examinations. Extensive research work and outside reading are required as well.

Western Civilization Honors (223)

This course features an in-depth study of the history of Europe from Ancient Greece through modern times. Emphasis is placed upon geography and sociology as well as Western Civilization's many contributions to the Modern World. Also featured in the course will be the Roman World, the growth of Christianity, Medieval Europe, the Renaissance, the Reformation, the Industrial Revolution and World War I. Students will be expected to do a considerable amount of outside reading and project work. Written homework and research papers will be assigned on a regular basis. This is a writing intensive course.

U.S. History 11 (232)

This course ranges from the colonial period to the 1990's. It traces the continual thread of American political and economic philosophy from the time of the founding fathers through the current Administration. The course is designed to develop reading comprehension through a careful analysis of material presented in the text and in outside reading. Comprehension skills involving map reading, deductive reasoning, and analytical comparisons are stressed.

U. S. History 11 Honors (233)

This honors survey course of American history, this course combines the history of politics and leadership with the history of American social and cultural life. Exposure to key events and the diverse mix of people that helped shape our country is a vital component of the course. Outside reading and various writing projects will be an integral part of the course.

Advanced Placement

U.S. History (234)

The first semester begins with the colonial period up to the growth of big business after the Civil War. The major themes of the course will include the conflict between Jeffersonian ideals and Hamiltonian pragmatism, the failure of American democracy to resolve the conflict between states' rights and the Union, and the growth of American culture. The second semester examines the dilemma of race from Reconstruction to the busing crisis in Boston, the reform of the economic system, and the wars between capital and labor, the Populists and the Progressives, the nature of FDR's New Deal, and the issue of the imperial presidency from the Spanish American War to Vietnam. A great deal of outside reading is required. Students who take this course are required to take the nationally administered Advanced Placement Test in American History. Students who perform well on this exam will receive college credit.

Advanced Placement European History (244)

This college level course offers a survey of European history from the high Renaissance through the 2000. Emphasis in the course is upon political and diplomatic history, intellectual and cultural history, and social and economic history. A great deal of outside reading and at least three research papers/projects are required. Students who take this class must sit for the nationally administered Advanced Placement Test in European History. Students who perform well on this exam will receive college credit.

U.S. Government (247)

This course is an introduction to the structure of the United States government. Students will study the branches of the federal government, the functions of state and local governments, and the principles of modern democracy. The course is designed to provide students with an understanding of their rights, duties, and responsibilities as informed, law-abiding citizens. The course explores political issues, parties, demographics, and the role of the media in our democracy. Additionally, students will engage in an examination of the priorities of the federal government in the context of current events and determine how changes in government reflect the needs and wishes of the electorate. Extensive outside reading, several writing assignments, and a research project are all required.

Psychology (248)

This course studies the human mind and human behavior by examining emotions, sleep and dreams, memory, intelligence, human development, personality theory, and mental disorders. Significant outside reading and a research project are required. Emphasis will also be placed upon critical thinking and student participation in class discussion.

Economics (702)

This course deals with the fundamentals of microeconomics and macroeconomics. Microeconomics (individual consumer and business decision making) involves buyer/seller relationships and rational economic behavior in a

free market, command market, or directed market. Macroeconomics (the study of the entire financial industry) deals with fiscal and monetary policy, balance of payments, inflation, recession, depression, etc. This course will explain in detail the workings of the United States economy and its effect on the world economy. An investigation of the stock market will be a featured part of the course. Students will also take part in a simulated stock market game. The course is open to juniors and seniors.

Introduction to Philosophy Honors (046)

This honors-level course will introduce students to the basic problems and methods of philosophical inquiry. Focus will be placed upon the work of major thinkers as Plato, Aristotle, St. Augustine, St. Anselm, St. Thomas Aquinas, Descartes, Hume, Voltaire, Locke, Kant, Marx, and Sartre. Topics to be discussed will include the nature of philosophy; the nature and limits of human knowledge; the nature and existence of God; the scope and limits of human freedom; the differences between right and wrong conduct; the nature of the moral life; and the meaning and value of human existence. Especially ideal for seniors taking Advanced Placement Modern European History, this challenging, demanding course will help students chart the intellectual history of modern Europe. Emphasis will be placed upon critical and analytical reading, writing, thinking, and arguing in the field of philosophy and theology.

Mathematics

Mathematics has long contributed to discovery and problem-solving in science and technology, decision-making in business and government, and creative expression in the arts. Our Mathematics program is structured to meet the needs and abilities of all our students. Most courses have both regular and honors sections. Although three years of mathematics are required by Catholic Memorial School, we strongly encourage students to take four years.

Integrated Math I (630)

This seventh grade pre-Algebra course is a bridge between arithmetic and Algebra intended to reinforce basic skills and procedures, while also introducing students to Algebraic concepts. Topics include decimals, fractions, integers, percents, proportions, equations and inequalities, patterns and functions, and graphing.

Integrated Math II (631)

This eighth grade class reinforces basic skills and then introduces students to algebraic concepts. Topics include patterns, equations, integers, exponents and metrics, fractions, decimals, proportions, angles and measurement. Students also learn signed numbers, exponential numbers, sets and systems, multi-step equations and geometry.

Algebra 8 Honors (633)

Eighth graders recommended for this course are offered a comprehensive introduction to algebra at a faster pace. In addition to topics covered in the Integrated Math II class, students also explore: solutions to linear equations, polynomials, factoring, rational expressions, functions and relations, slopes and intercepts of lines, inequalities, systems of equations, roots and radicals, quadratic equations, Euclidean geometry, plane and three dimen-

sional geometry, ratios, proportions, percents, right triangles, trigonometry, and coordinate graphing.

Algebra I (310, 312)

This course includes a sound treatment of essential algebraic concepts and skills. Topics include: signed numbers, set theory, solutions of first degree equations, polynomials, factoring, fractional expressions, graphing and the equations of lines, systems of equations, and radicals.

Algebra I Honors (313)

This course is intended for the talented mathematics student. Course content, treatment, and methodology are demanding, rigorous, and comprehensive. Topics include: solutions to linear equations, polynomials, factoring, rational expressions, functions and relations, slope and intercepts of a line, inequalities, systems of equations, roots and radicals, and quadratic equations.

Geometry (322)

This course presents essential geometric concepts and their logical consequences. Particular emphasis is placed on deductive reasoning and the mastery of properties of the standard geometric figures and their applications. Students are expected to acquire an understanding of the basic structures of geometry

and to develop an appreciation of logical reasoning. The following topics are included: the demonstration of theorems, induction and deduction, angle relationships, perpendicularity, congruent and similar triangles, circles, areas of polygons and circles, and areas and volumes of solids.

Geometry Honors (323)

This course is intended for the especially talented mathematics student. The dual objectives of this course are to establish an understanding of the logical, deductive basis of geometry and to develop a facility in the application of geometric concepts. Topics include: methods of proof, induction and deduction, angle relationships, perpendicular lines and planes, congruency and similarity of polygons, simple trigonometry of the right triangle, circles, constructions and loci, areas of polygons and circles, and areas and volumes of solids. Prerequisite: teacher recommendation.

Algebra II (332)

The primary objectives of this course are to provide students with a solid knowledge of second year algebra and to lay the foundation for further study in finite mathematics and trigonometry. Topics include: linear equations, factoring polynomials, powers and roots, quadratic equations, systems of equations, relations and functions, logarithms, complex numbers, and elementary trigonometry.

Algebra II Honors (333)

The main purpose of this course is to provide a solid foundation of second year algebra, finite mathematics, and

the essentials of trigonometry. The course content will include: linear equations, functions, factoring polynomials, systems of equations, determinants and matrices, complex numbers, quadratic equations, exponential functions and logarithms, sequences and series, probability and trigonometric functions. This course is designed for those students with strong mathematical ability. Prerequisite: teacher recommendation.

Mathematical Analysis Honors (334)

The primary objective of this course is to prepare students for a thorough and rigorous calculus course at the Advanced Placement and college level. A comprehensive treatment of trigonometry and analytic geometry will be emphasized. Other topics included will be solution of higher degree equations, function theory, vectors, sequences and series, probability, polar coordinates, and matrices. Prerequisite: teacher recommendation.

College Prep Mathematics 12 (341)

The dual objective of this course is to present students with elements of algebra, geometry, and trigonometry necessary for college level mathematics and to prepare for the SAT examination. Topics include: quadratic and higher degree equations, a thorough treatment of trigonometry, exponents and logarithms, complex numbers, and determinants. Prerequisite: teacher recommendation.

Pre-Calculus (342)

This course is designed for the competent mathematics student. Topics include: conic sections, linear and quadratic inequalities, functions and relations, exponents, logarithms, solution of polynomial equations, vectors, complex numbers, matrices and determinants, and a full treatment of trigonometry. Prerequisite: teacher recommendation.

Advanced Placement Calculus (344)

The primary purpose of this course is to present to the student a demanding, rigorous course in Calculus as preparation for the Advanced Placement Calculus Test nationally administered in May. Topics include: functions and derivatives, maxima-minima problems, related rates, definite and indefinite integrals, continuity, limits, the differential, logarithmic and exponential functions, elementary differential equations, and techniques of integration. Prerequisite: Math Analysis Honors as well as teacher recommendation.

Discrete Mathematics Honors (355)

This course is intended for competent senior math students as an elective

math course or for those math student who would like to take a second math course in addition to a core math course (Advanced Placement Calculus, Math Analysis, Pre-Calculus, or College Prep Math). Topics include: probability, statistics, matrix algebra, graph theory and Hamiltonian circuits, Markov chains, recursion and election theory.

Accounting I (705)

This course offers an introduction to the accounting cycle and its underlying concepts. It covers the techniques involved in the analysis of financial transactions, journalizing, posting, summarization of data for trial balances, worksheets, preparation of financial statements, and types of payroll systems. This course is open to juniors and seniors.

Accounting II (706)

This second year course is a continuation of Accounting I. Students who have achieved competence in Accounting I are offered the opportunity to study the field in much more depth. Prerequisite: teacher recommendation.

Science

Science is the process of seeking knowledge of truth and order in the universe. As one of civilization's major intellectual achievements, science is fueled by the same creativity required of art, music, and literature. Strong scientific inquiry relies on curiosity, objectivity, and healthy skepticism. The study of science is an excellent preparation for college, regardless of a student's career interests. Catholic Memorial's Science program is designed to provide a challenging and stimulating curriculum which meets the needs and abilities of our students. Advanced courses are offered for those who intend to major in science while in college and several courses have special sections designed for students with superior scientific ability.

Integrated Science I (640)

This course initiates a two-year, inquirybased introduction to the fundamental concepts of life, environmental, physical, and earth & space sciences. An organized and analytical approach to problem-solving, grounded in the scientific method, exposes students to the wonder and usefulness of critical observation. Hands-on experiments, concrete demonstrations, and creative projects are used to stimulate the natural curiosity of students. Students also compete in a peer and faculty evaluated science competition. Seventh grade students also explore the science of structure and design by building load-bearing spaghetti bridges.

Integrated Science II (631)

This 8th grade course builds progressively on the fundamentals mastered in 7th grade so that by 8th grade a more defined focus on life processes, matter, and energy can be pursued. By the end of the two-year (7th and 8th grade) program, students are well-prepared for the study of physical science, biology, chemistry, and physics in high school. Eighth grade students are also introduced to various aspects of

aerodynamics and physics through the annual Egg Drop Contest.

Physical Science (413)

Physical science deals with the fundamental laws of the physical world. The goal of this course is to prepare students for further study of science at the high school level. Most class time is spent studying the basic principles upon which the study of biology, chemistry, and physics is built. Environmental science issues are also introduced at appropriate times as well as the study skills specific to the subject of science.

Biology (422)

Knowledge of biological function is an important facet in adolescent development. This college preparatory level course presents a survey of fundamental life processes. Taking the cell as the basic unit of life, the student learns about structure within cells and their function. In the discussion of genetics and heredity, the importance of DNA and its role in cellular control and protein synthesis is developed. The function and adaptation of multi-cellular organisms is followed along a phylogenetic scheme with a view to Darwinian evolution. The mammal, especially

man, is presented as the end of this scheme with an emphasis on development and function.

Biology Honors (414)

This rigorous and intensive course presents an overview of biology in both lecture and in the laboratory. Seven areas of concentration include: biochemistry, cell biology, phylogeny, ecology, evolution, genetics, and human anatomy and physiology. Students present formal laboratory reports at the end of each teaching cycle. During the third marking period, students are required to prepare a major research project.

Chemistry (432)

This chemistry course presents to the college bound student a fundamental picture of our atomic world. Although less rigorous than the Chemistry Honors course, this course completes a basic college preparatory program in lecture and laboratory. Topic areas include matter and energy, atomic structure, bonding, the periodic table, nomenclature, chemical reactions, gas laws, solutions, thermodynamics, equilibrium, acid-base theory, electrochemistry, and nuclear chemistry. Although some algebraic computation is encountered in this course, students concentrate on the physical and chemical processes upon which chemical theories are based. In lab, students collect, organize, and interpret data. They also practice skills needed to present information in the form of written reports.

Chemistry Honors (424)

Emphasis in this course is upon the experimental aspects of chemistry.

Students are provided with the opportunity to record and organize observations into patterns that reveal chemical principles. Central to this course is the development of modern atomic theory and the behavior of matter associated with electron configuration. Lecture material provides students with detailed knowledge of course content: nomenclature, chemical reactions, solutions, gas laws, equilibrium, nuclear chemistry, and organic chemistry. Laboratory and detailed lab reports reinforce concepts learned in class. Prerequisite: teacher recommendation.

Chemistry II (455)

This honors course provides a comprehensive second year of chemistry. The syllabus is similar to that of a college course. Students who take this course may take an Advanced Placement Chemistry exam at the end of the course, but must prepare for the exam on their own time. This course requires a strong aptitude in chemistry.

Physics (442)

This college preparatory course is designed for the average college bound senior. Topic areas include kinematics, energy, momentum, gravitation, electromagnetic theory, electricity, and atomic theory. Although similar in content to the Physics Honors course, this course presents a less rigorous treatment of problem solving skills. In the lab, students further develop their skills in collecting, organizing, interpreting, and presenting data.

Physics Honors (434)

In this course, a mathematical approach is used to present physics in a way

which will enable students to achieve maximum comprehension. Emphasis is placed upon the development of an analytical approach to the solution of physical problems. In this course, greater attention is given to problem solving than would usually be encountered in a regular high school physics course. Lab work allows students to collect and organize data into meaningful patterns that confirm concepts learned in class. Topics include: mechanics, heat and thermodynamics, electricity, magnetism, electronics, acoustics, optics, and nuclear physics.

Physics II (456)

This honors course presents a second year of physics for students interested in pursuing a college course of study in science or engineering. The course concentrates on the areas of mechanics and electricity. Students are exposed to the study skills, lab report writing, and examination preparation skills which will be needed for rigorous college-level science courses. Students taking this course should have a firm mathematical background and should have completed the Physics Honors course.

Anatomy and Physiology (444)

Anatomy and Physiology is a full year elective course for seniors who have an interest in science, medicine, physical and occupational therapy, athletic training, exercise, physiology, or nursing. This regular level course will expose students to the study, lab, writing, and test-taking skills needed in a college-level science course. The following topics are included: micro and macro anatomy of the musculoskeletal system, cellular biology and metabo-

lism, major body systems, biomechanics, and exercise physiology.

Introduction to Computer Applications (715)

The goal of this required freshman course is to produce students who have the skills and confidence needed to use the computer as a research tool. The course begins by introducing students to touch typing skills. It then moves on to word processing and Excel spreadsheets. By the end of the course, students will be proficient at using the Internet and Catholic Memorial's considerable on-line resources for academic research.

Computer Business Applications (720)

This elective course for juniors and seniors focuses on financial and business problems. Students use computer applications (especially the spreadsheet and database) to solve problems. Economic topics such as stocks and investing, as well as practical money management, income taxes, and managing an on-line checking account are covered. Additional topics include: business letters, resumes, budgets, inventory, payroll, mortgages, investments, financial plans, profit and loss. This course is intended for students who enjoy working independently and are interested in studying business in college. Prerequisite: teacher recommendation.

Computer Science Using Java (743)

This course serves as an introduction to the Advanced Placement Computer Science course. It is a technical and ba-

sic survey of modern computer science and a “must” for students planning to study computer science in college. Future engineering, computer science, math, and science majors should also consider this course. Students may elect to take this as a single course in their senior year or it may be taken in junior year to prepare for the Advanced Placement Computer Science course. Students will learn advanced programming in JAVA. Basic methodology involves oral introduction to each section of new material followed by independent student work on practice exercises. Regardless of ability, all students are encouraged to proceed through the course material at their best pace. Once students have mastered the basic content, they are assigned projects that challenge them to apply the skills they have learned. prerequisite: teacher recommendation.

Advanced Placement Computer Science (722)

This course prepares students for the Advanced Placement Computer Science exam. Using JAVA programming language, this course follows the Advanced Placement syllabus in preparation for the nationally administered Advanced Placement examination held in May. This course is intended for students interested in programming or computer science and builds on the material learned in the first course. The two courses are equivalent to first semester college courses. The student who takes this course must be prepared for difficult material and must be able to work independently. All students who plan to study computer science should consider this course. Prerequisite:

include a basic understanding of the Java programming language and a teacher recommendation.

Web Design and Multimedia (725)

In this course students will learn to design rich, interactive content for both traditional and mobile web technologies, as well as grasp an understanding of design fundamentals like color theory, typography, illustration, digital image manipulation. Programs such as Adobe CS4 suite to Microsoft Visual Studio will be used. Students will also learn to master the multiple languages used in interactive design, such as XHTML, CSS, XML, Flash, Action Script, Java Script. Students will design and present a portfolio to showcase all of their projects during the year.

Computer Game Design and Multimedia (735)

JUNIOR/SENIORS

In this course students will study the broad issue of Computer Language, technologies, science, and arts that are involved in the creation of Computer Games. Students analyze and create games learning variety of genres and new programming concepts and systems such as Game Maker Pro, XNA, Maya and Flash. The course will include visiting lectures and a variety of group projects. The group projects will involve system implementation, but emphasize design and use of all of the latest software and game editors in the gaming industry. Students will design and present a portfolio to showcase all of their projects during the year.

World Languages

The World Languages Program provides the opportunity to read, write and speak another language while also appreciating and respecting a different culture. Communication is stressed with an emphasis on the development of listening and speaking skills. As students progress, increased emphasis is placed on writing and reading. This process of instruction parallels the manner in which we learn our native tongue. Participation in the World Languages Program also helps students gain greater insight into the structure of English and to carry this knowledge to other academic disciplines.

Language Arts 7 (617)

This seventh grade course places strong emphasis on the strengthening and advancement of grammar and writing in order to promote correct usage. It also establishes a strong foundation that enables students to read, write and process curriculum for all disciplines through the study of literature appreciation and analysis, grammar, vocabulary and spelling, writing, pleasure reading and study skills. Students also receive instruction in Speech with the intended outcome that each student should be able to use public speaking techniques in order to read and perform in front of others comfortably.

Language Arts 8 (618)

This course eighth grade course builds upon its seventh grade equivalent focusing on tasks which help students acquire and integrate process skills needed to show proficiencies in such communication areas as creative and critical thinking, literature appreciation and analysis, and writing for various purposes and audiences. Students focus on the concept of author’s purpose and that of audiences beyond their classroom walls. They receive directed instruction in oral and written expression while also cultivating note taking,

research, documentation, and word processing skills.

Latin I (561)

The aim of this first year course is to develop the ability to read and comprehend Latin. This is accomplished through a study of vocabulary, rules of grammar, and language syntax. The role played by Latin culture in shaping Western civilization is presented through Latin readings and English essays on Roman life, history, and mythology.

Latin II (562)

This course is a continuation of Latin I. After an intensive review of the structures studied in the first year, this course continues to delve into the basics of Latin grammar, vocabulary, and syntax. Various reading selections serve to develop the aforementioned goals.

Latin III (563)

Students will continue their study of Latin vocabulary and grammatical structures. Students will translate unadapted passages of ancient texts demonstrating their ability to understand and interpret the Latin passages. Readings include works of Eutropius, Julius Caesar, Cicero, Pliny, and Augustus. Students will examine the historical

and political life, culture, and influence of the ancient Romans during the late republic and empire.

Latin Literature (564)

This advanced, college preparatory course involves student exploration of Latin at roughly the same level as the Virgil Latin Course (between the fourth and sixth semester college level). The course involves students in extensive reading of the ancient, classical texts and writings of Latin literature. Students are expected to be able to translate from Latin to English the literature selections presented in class while also demonstrating a firm grasp of grammatical structures and vocabulary.

Latin Virgil (565)

This course is a survey of Latin literature with emphasis upon Virgil's Aeneid. Attention is also given to selected areas of Greek and Roman mythology. In this course, students study the legends and history behind various readings and start to appreciate the literary style of the poetry selections.

Classical Mythology (566)

This course is designed to be an introduction to classical mythological themes. Students will gain insight into the connections among myths, literature, and the art of the western world. Topics to be covered include: Creation; Gods-Titans & Olympians; Heroes & Heroines; Trojan War; Odysseus; Families of Mythology; Adventure, Love & Monsters; and Lesser Deities.

Advanced Placement Virgil (569)

This course would follow the guidelines

set forth by the Advanced Placement College Board for the study of Virgil's Aeneid. Students will practice sight reading of the Aeneid; study the historical, social and cultural context of the Aeneid; and practice writing essays analyzing and interpreting the text. Students must have a 90% average in previous Latin courses and be ready to commit to the rigorous pace of an Advanced Placement course. Students interested in taking this class must be interviewed by the teacher to ensure a willingness to complete the required summer reading assignment.

French I (581)

An intensive introduction to the language and culture of the French people throughout the world, this course has the fourfold aim of having students understand, speak, read, and write in French. Initial emphasis on the spoken word in a visual context provides a logical learning sequence with a smooth progression from spoken to written language. A realistic view of all aspects of French culture, including history, geography, economics, and customs, is provided.

French II (582)

A continuation of French I, this course begins with a complete grammar review followed by an introduction to more complex grammatical constructions. This course is designed to ensure rapid acquisition of the listening, reading, and writing skills necessary for meaningful communication in both spoken and written French. Students are presented with a highly structured, logical sequence of opportunities to enable them to learn and practice French

in a manner that is both stimulating and enjoyable.

French III (583)

This course is designed to provide a review of the four basic skills of speaking, listening, reading, and writing, with significant emphasis on reading and writing. A concentrated effort is made to bring students to a level of confidence whereby reading in the target language is used as a basis for oral comprehension, speech, and written expression. From a foundation built upon grammar and usage, the student moves to a more extensive study of literature and culture in the French speaking world.

French IV (584)

The general objective of this course is to develop the four basic skills of language learning: listening, speaking, reading, and writing, using standards established by the College Board. This college preparatory course is taught in French to students with a strong interest in French language learning and firmly established language skills. French grammar is reviewed and followed by reading various works in French. French literature and the study of French culture are also covered at length.

Advanced Placement French (586)

Students who enroll in Advanced Placement French should already have a good command of French grammar and vocabulary and have demonstrated competence in listening, reading, speaking, and writing in French. Course content will reflect interests

shared by the students and teacher (the arts, current events, literature, sports, etc.). Materials will include audio and video recordings, films, newspapers, and magazines. Students enrolled in this course are expected to take, and pass, the nationally administered Advanced Placement French language exam.

Spanish I (512)

This is an intensive introduction to the language and culture of Spanish speaking people throughout the world. The course stresses the four language fundamentals of listening, speaking, reading, and writing and serves as a basis for all further language study. The cultural topics of the course include history, geography, and Hispanic customs.

Spanish II (522)

Students who have had a basic introductory course in Spanish are now ready to move into their second year of Spanish. This challenging course encompasses new vocabulary and grammar, including several new tenses, both simple and compound. The flow of the course is rapid and interesting. Culture and history are presented in various short story selections. To take this course, students must have successfully completed Spanish I.

Spanish II Honors (523)

This course will cover the same material as Spanish II, but will proceed at a faster, more intense pace, with additional outside reading selections.

Spanish III (532)

This course offers continued emphasis on speaking, reading, and writing

Spanish. Reading selections based upon contemporary aspects of Spanish and Spanish-American life afford up-to-date reading material and the basis for meaningful class discussions in Spanish. Attention to essay writing is stressed.

Spanish III Honors (534)

This course will cover the same material as Spanish III, but will proceed at a faster, more intense pace, with additional outside reading selections.

Spanish IV (544)

This course emphasizes written and oral communication centering on short stories, videos, and written articles. Course work includes intensive vocabulary, grammar review, and translation. Active class participation is required.

Advanced Spanish Honors (545)

This course is designed for the highly advanced Spanish student. All conversation and discussion is conducted in Spanish. Focus is on Latin American art, literature, poetry, culture, economics, and history. Students will compose weekly Spanish language compositions and have weekly oral presentations.

Irish Studies I (550)

The class will explore the history of Ireland and the culture of its people through the centuries from the arrival of the first Celtic tribes to the modern era of the Celtic Tiger. Students will examine the role of Catholicism in the life of the country as well as numerous other topics that have shaped its heritage. Recognizing that a land without a tongue is a land without a soul, the students will also begin a study of elementary Irish language.

Irish Studies II (551)

Offered as an elective course, Irish Studies II will continue where Irish Studies I left off and provide even deeper exploration into the history, culture, and a more intensive study of the language of Ireland.

Italian I (571)

Offered as an elective course, Italian I will present the present, past, and future tenses, and several other basic grammatical structures. It will present a survey of the music, food, art, history, and literature of Italy with a special emphasis on Italian immigration to the United States. The class will be taught according to a modified language immersion model.

Italian II

Offered as an elective course, Italian Two will continue where Italian I left off, moving deeper into the target language. The class will also expand a survey initiated in Italian I of the music, food, art, history, and literature of Italy. The class will be taught according to a modified language immersion model.

Chinese I (591)

Through a special partnership with The College Board and the Ministry of Education for the People's Republic of China, Catholic Memorial received a fully funded teacher of Mandarin Chinese in late January 2007. The only high school in the Boston area to have received this award, CM is using this opportunity to launch an Advanced Placement program in Mandarin Chinese. In recognition of CM's growing Mandarin program, Catholic Memorial received two full-time teachers

from mainland China in September 2008. Chinese I will be a full-year course that will introduce students to the basic structure of spoken and written Mandarin Chinese. The class will also explore the art, culture, food, and music of the Chinese people. Although no prerequisite is required, students already participating in Introduction to Mandarin Chinese sessions will transition to this class with ease.

Fine Arts

The art courses at Catholic Memorial are elective and studio based. They are designed to meet the needs of all students whether they are serious students who intend to major in art in college or students who enjoy art as an avocation. The courses are based on four primary tenets of art education: art production, art history, art criticism, and aesthetics.

Music 8 (690)

This eighth grade course provides a foundation in the fundamentals of basic music theory, choral singing, and an overall understanding of general music and music principles. Students become adept at speaking about the "language" of music and learn how music can assist in learning about different cultures and traditions throughout the world. Students also participate in a public performance.

Art 7 (680)

This seventh grade course focuses on the basics of art at the beginner level. Students are educated on the elements of art and the principles of design and learn how to use them in creating their artwork. Drawing is emphasized in order to provide as solid a foundation as possible for future art courses. Throughout the year, students complete several major drawing, mixed media, painting, and printmaking

Chinese II

A full-year, elective course that will follow on the heels of Chinese I, Chinese II will provide students with a deeper understanding of Mandarin language and grammatical structure. The art, culture, food, and music of the Chinese people will also be studied. Students interested in participating in this class must have already taken Chinese I as a prerequisite.

projects. This course helps students integrate their knowledge of art into their other school subjects as well.

Art Appreciation (959)

This course requirement for freshmen links the ancient world to the present through the evolution of art. Using a comprehensive art history survey, it focuses on significant contributions from cultures around the globe.

Music and Art (800)

A unique combination of music and art appreciation, this course will meet alternately during the week in the Music Room and Art Room for a lively exploration of visual art and its musical counterparts. Consideration will be given to the historical circumstances which fostered artistic expression through various visual and auditory media.

Music in Theory and Practice (810)

This course will include the following topics: notation, scales, intervals, rhythm, harmony, melody, and composition. This course will also include listening and analyzing various musical genres. Jazz Ensemble (820) This full-year, performance-based course is open to students who play an instrument and who wish to further their skills through the study and performance of various genres of music. The course covers Rock, Pop, Blues, Swing, Broadway, 50's Rock and Roll, Contemporary, Latin Music, and film scores. This course is open to students who demonstrate musical skill and comprehension of their selected instrument.

Choir (825)

"If music be the food of love, play on" (Shakespeare) A performance-based class that performs at our school celebrations and liturgies, this elective class will help advance Fine Arts at Catholic Memorial to the next level. The class will perform at the annual holiday concert and various school functions, events, and community center performances. In addition to being musical representatives for our school, the class will work to expand its repertoire with more ever more challenging pieces. The culmination of this class is the recording and production of an annual CD.

Introduction to Acting and Improvisation (830)

The techniques of improvisation and acting venture further than the walls of a theater. Not only are such techniques

sought after in the working world, but they are necessary skills. The ability to improvise during a question and answer session at a corporate business function; the ability to "become" the "character" during an advertising commercial sales pitch; the ability to communicate and be confident during a job interview or marketing sales pitch . . . skills which will resurrect themselves time and time again. Through the introduction to acting and improvisation, we will study techniques which date back to the *comedia dell'arte*. From ancient to modern, from The Old Globe Theatre to ABC's *Who's Line Is It Anyway?*, this elective will challenge the student and the instructor to be creative within an everchanging world.

Studio Art I (843)

This course is designed for those students interested in developing their own creative expression, seeking further courses in art, or desiring new ways to express their creativity. The course seeks to develop an understanding of artistic media and the methods for those media. Emphasis is placed on realistic representation which entails knowledge of line, value, texture, composition, and perspective. Students will be expected to develop and maintain a portfolio as an evaluative tool for this class. Lecture, research writing, studio experience, and individual instruction will be used.

Studio Art II (844)

This advanced art course may be taken by students who have completed Studio Art I and/or are recommended by the teacher. The first semester will seek to achieve mastery of realis-

tic drawing and drawing materials. The second semester will explore oil, watercolor, and acrylic painting techniques--concentrating effort on one of these media. The class will include historical research, as well as classroom and individual instruction. A significant amount of work must be done outside of regular class time.

Studio Art III (890)

Designed for the serious art student, this course will explain the procedures and formats necessary to develop a comprehensive Studio Art portfolio. Students will then produce artwork using rubrics and parameters established by the College Board. Student work must demonstrate breadth, originality, and creativity through various mediums. Independent work outside of school is required in order to meet the rigorous demands of this course which include various projects that meet nationally normed criteria, independent projects, and museum gallery work.

Advanced Placement Studio Art (888)

This course is designed for the art student who wishes to pursue a more intensified study of art. The requirements of the course are supplied by the Advanced Placement Committee and have evolved at this time into the presentation of an extensive portfolio in three areas: quality, concentration, and breadth. Since the student will be required to do a large amount of work on his own, there should be consultation with and permission from the teacher before this course is scheduled. The student will be responsible for a six-hour time commitment per week as

well as an out-of-school commitment to museum and gallery study. Homework activities will include maintaining a sketch journal.

Cartooning (850)

This course emphasizes drawing skills as well as elements of imagination and creativity necessary to produce two-dimensional comics and animated pieces. Subject themes reflect social issues, ethnic diversity, historical events, fantasy, sports, and science fiction. Production includes caricatures, various forms of cartoons, flipbooks, and computer animation.

Digital Art (870)

This course is an introduction to image generation and manipulation using current industry-standards and illustration/design computer software programs (Adobe Photoshop, Illustrator, and Fractal Design Painter). Students will scan, import, generate, process, and combine images and type using desktop publication software. Emphasis will be placed on image making. Output possibilities will be demonstrated and differences between computer techniques and traditional techniques will be discussed when critiquing student work.

Computer Graphics (872)

This course is designed to introduce the use of the computer as a creative tool to express visual images. Adobe Photoshop and presentation applications, as well as scanning and the digital camera, will be taught. Students will learn how to effectively use photo editing and page layout programs as graphic arts tools. The course will provide the

students the understanding of how to design elements and principles when creating their computer generated art.

Design and Drawing for Production (880)

This course is designed to introduce students to a universal graphic language through which creative ideas

may be expounded with clarity and exactness. The majority of class time will be spent learning the fundamental methods of this expression while developing a degree of proficiency in sketching and in the use of draftsman instruments and equipment. The latter part of the year will be spent designing and developing projects and architectural models.

Physical Education

The purpose of the Physical Education program at Catholic Memorial is to teach students the meaning of total body fitness and to develop proper attitudes towards exercise which will sustain a lifetime of physical activity. The program emphasizes personal fitness while also introducing the principles of team sports. Activities include running, walking, aerobics, flexibility, and weight training in combination with fitness testing. Team sport activities include soccer, touch football, volleyball, floor hockey, softball, basketball, and lacrosse.

Physical Education 9, 10, 11 (900, 902, 903)

The graduation requirement allows the student to combine physical education credit with co-curricular athletic participation. A student must achieve six units of physical education in order to graduate. All freshmen and sophomores must take physical education for two semesters. A full season of participation on any high school athletic team may count as a credit toward the graduation requirement. Any combination of six credits in Physical Education

or athletic team participation fulfills the graduation requirement.

Health (492)

This full-year course for sophomores begins with the important issues of personality, self-esteem, and stress. The program presents and emphasizes the skills necessary for building healthy relationships. Human development, nutrition, personal care, and fitness dominate the core of the program. The course ends with issues and topics surrounding substance abuse, disease prevention, and first aid.

Virtual High School Offerings:

VIRTUAL HIGH SCHOOL (VHS) In June 2008, Catholic Memorial School became part of the ACCEPT/VHS Consortium. Virtual High School, the gold standard for on-line learning. The ACCEPT/VHS Consortium was created ten years ago to bring Virtual High School's on-line education to members of the Metro west ACCEPT Collaborative and other partnering schools both private and public.

Our participation in VHS enables us to expand our Advanced Placement course offerings. Thus, in addition to the "live" Advanced Placement courses offered at the school in Art, Math, Social Studies, World Language, Computers, and English, students with an 85% or better may, with the approval of the academic area coordinator, request to take an Advanced Placement course online through VHS. Fully supported and accredited by the College Board, these on-line courses are rigorous. They are offered as part of CM's tuition (thus, there is no additional cost) and participants in these classes must sit for the nationally administered Advanced Placement exam at the conclusion of all course work. An on-site VHS administrator at Catholic Memorial monitors student progress and handles any technical and/or academic difficulties that may arise with regard to VHS.

Enrollment in VHS is limited and we cannot guarantee placement. Students should choose an alternative in case they are denied admittance.

Advanced Placement Art History (885)

Discipline: Fine Arts
Grade Level: 10, 11, 12
Level: Advanced Placement
Offering: Full Year

The study of art production throughout humankind in historic as well as prehistoric times produces a unique perspective of the era under scrutiny. The visual language of human beings speaks more directly and immediately through the age than any other form of human communication. In this course, students will acquire a comprehensive knowledge of historically significant artists, movements, aesthetic theories and practices, ranging from the prehistoric times to the significant contributions in the 21st Century. Art produc-

tion of all cultures will be studied in relative proportion to their representation on the Art History Advanced Placement Exam. Students will see the development of trends, movements, and events in art, how they reflected and affected the times in which they occurred, gaining insight into typically misunderstood topics pertaining to the visual arts. Students will research and write knowledgeably on a number of art history topics, reflecting and synthesizing their own theories on the many works they will see in virtual museums and collections. Through carefully structured assignments, they will be expected to exhibit extensive scholarship in conjunction with these experiences.

Advanced Placement Calculus BC Section (345)

Discipline:Mathematics
Grade Level:10, 11, 12
Level: Advanced Placement

Prerequisites:..Four courses of secondary mathematics designed for the college bound student. The VHS Advanced Placement Calculus BC course is a full academic-year course. It is a challenging course designed for high school students who have completed four years of secondary mathematics courses such as Algebra, Geometry, Advanced Algebra, Trigonometry/ Pre-Calculus (which includes some Analytic Geometry and elementary functions). Work is comparable to that required in most college and university Calculus courses. Students should plan on taking the Advanced Placement Calculus BC exam offered in May. Successful completion of the Advanced Placement exam may provide students with the opportunity to receive college credit. The Advanced Placement Calculus BC course covers all topics in the Advanced Placement Calculus AB course plus the following additional topics: Parametric, polar and vector functions Slope Fields Euler's method L'Hopital's Rule Improper Integrals Logistic differential equations Polynomial approximations and series Taylor Series Emphasis is on conceptual understanding. However, facility with manipulation and computational skills are important outcomes. Students should expect the course as well as the Advanced Placement exam to truly push the depth of their understanding of mathematics generally and calculus specifically. Areas of emphasis from the College Board's online resource for

Advanced Placement Calculus can be found at: http://apcentral.collegeboard.com/repository/ap03_cd_calculus_0405_4313.pdf

Advanced Placement Computer Science (722)

Discipline: Science/Technology
Grade Level:10, 11, 12
Level: Advanced Placement

Windows machine is required with: Microsoft Word, Acrobat Reader, and WinZip. Downloading and installation of Java programming environment will be assigned in Week 2 of this course, and may require extensive local tech support. Some prior exposure to computer programming is recommended before enrolling.

Advanced Placement Economics: Micro and Macro (704)

Discipline: Economics, Social Studies
Grade Level:10, 11, 12
Level: Advanced Placement

This college-level course surveys fundamental themes in microeconomics and macroeconomics. Broadly understood, economics is concerned with how to maximize the fulfillment of society's unlimited wants through the efficient use of scarce resources, capital, labor, land and entrepreneurial abilities. This course will enable students to make informed decisions about consumption, investing, politics and citizenship. Microeconomics concentrates on those principles that relate to the functions of individual decision-makers in our economy. Microeconomics considers the effects of government interven-

tion on the market system, including the effects of taxation and transfer programs on income distribution and economic efficiency. Macroeconomics focuses on those principles that apply to the economy as a whole. It provides an overview of our economic system and measurements of economic performance, including gross domestic product, inflation, and unemployment. It analyzes national income, the role of money and banking, the workings of monetary and fiscal policies to manage short and long-term unemployment and inflation rates, and the federal budget and the national debt.

Advanced Placement Environmental Science CN (450)

Discipline: Science
Grade Level:10, 11, 12
Level: Advanced Placement

Prerequisites: One full academic year of both high school-level biology and chemistry. The goal of the Advanced Placement Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Yet there are several major unifying constructs,

or themes, that cut across the many topics included in the study of environmental science. Students will need access to both a scanner and a digital camera to complete assignments for this course. The scanner is needed only occasionally, but the digital camera will be used on a regular basis.

Advanced Placement Physics B

Discipline Science
Grade Level 11, 12
Level: Advanced Placement

Prerequisites: Mathematics skills through Pre-Calculus or its equivalent. Must have a good grasp of plane geometry, right angle trigonometry and be able to factor quadratic equations. This course will not assume any prior physics course knowledge, however, if you have already taken an introductory course it should make the going easier for the first eight chapters. This course is designed to prepare students to participate in the Advanced Placement Physics (AP) test administered in May. There are two AP tests. "C" requires the use of calculus and only covers mechanics and electricity and magnetism. "B" is the approximate equivalent of a two-semester course in non-calculus based physics. Topics will range over the entire spectrum of physics including mechanics, properties of matter, thermodynamics, acoustics, optics, electricity, magnetism and modern physics. Students will be required to participate in small group discussions, home laboratory experiments, a few virtual field trips and an extensive array of tests and quizzes.

Advanced Placement Physics C (454)

Discipline Science
Grade Level 11, 12
Level: Advanced Placement

This course provides a systematic introduction to the main principles of Mechanics, Electricity and Magnetism, that will form a foundation for college studies of other sciences, engineering and technology. This algebra, geometry, and calculus based course emphasizes several components - knowledge of the basic laws of nature, the ability to apply that knowledge to the particular phenomenon and the ability to achieve its complete experimental and theoretical explanation. Great attention is given to the connectivity between the sciences. In addition to this interdisciplinary approach, modern technology is used to increase the level of study, which includes a multimedia approach to reports and projects. The sequence of topics is traditional and relies on the College Board requirements. Theory, discussion, labs and problem solving are the major tools for the students' education.

As an advanced placement (college-level) course, this course is rigorous, and students can expect to spend a minimum of 2 hours per day (5 days per week) doing coursework. Students should be highly motivated & interested in pursuing college studies science, engineering and/or technology. Access to Excel spreadsheet is important as it is used frequently for mathematical modeling of physics problems.

Basic knowledge of integrals and derivatives is required; students concurrently enrolled in AP Calculus may find that the calculus components of this course may be introduced before these same topics are covered in their AP Calculus course. Students taking calculus concurrently can successfully complete this course under those conditions but should work closely with their AP Physics Instructor to avoid unnecessary frustration due to the timing of calculus topics. Students should always let instructors know when calculus topics in physics precede what they have learned in calculus class.