CISTERCIAN PREPARATORY SCHOOL

CURRICULUM GUIDE

MISSION, HISTORY, AND ORGANIZATION

The Cistercian Preparatory School was founded with the aim of preparing talented boys for the colleges of their choice by challenging their minds with excellent academic programs, molding their characters through the values of Catholic education, and offering them guidance with both understanding and discipline.

The Cistercian monastic order was established in the twelfth century and has been involved in different forms of education since the Middle Ages. The Cistercian Abbey Our Lady of Dallas was founded in 1956 by Cistercians from Hungary who came to the Dallas area to help with the establishment of the University of Dallas, where part of the Cistercian community still teaches. The Cistercian Preparatory School is built next to the Abbey and adjacent to the campus of the University of Dallas. The facilities of the School include Middle and Upper School buildings (built 1964-65 and 1966-67), Gymnasium (1972), Science Center (1985), Chapel (1992), and Library (1997).

The School consists of the Middle School, Forms I-IV (grades 5-8), and the Upper School, Forms V-VIII (grades 9-12). Each Form is under the direct guidance and supervision of its Form Master. The Form Master is the link between the School and the parents. He supervises the discipline in his Form and helps the students in all matters of academic and personal growth. Both the Middle and Upper Schools are under the authority of the Headmaster, the administrative leader of the School. The operation of the School overseen by the School Board, which consists of six Cistercian Fathers and six laymen appointed by the Superior of the Cistercian Monastery. The President of the School Board is the Abbot of the Cistercian Monastery of Our Lady of Dallas.

Cistercian Preparatory School is accredited by the Independent Schools Association of the Southwest (ISAS) and by the Texas Catholic Conference Education Department (TCCED).

Cistercian Preparatory School does not discriminate on the basis of race, color, creed, national, or ethnic origin in the administration of its admission and education policies, financial aid programs, athletic programs, and other activities.

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GENERAL PRINCIPLES OF THE CURRICULUM

The Cistercian curriculum has been developed according to principles that both reflect the Order's deep roots in the history of Western Civilization and strive to meet the educational needs and concerns of the Dallas-Fort Worth metroplex. The Cistercian Order, following the rule of St. Benedict, has understood itself from its inception as "a school in the Lord's service," a training ground in which all human faculties are elevated and prompted to do God's will in prayer and work, and in which the development of the individual is linked to the formation of a Christian community, based on the gospel, centered in Christ and directed toward the service of God's people. The beginnings of the Cistercian Preparatory School in the Dallas area took place at a time when special educational needs and concerns were coming to the fore in the local Catholic community. These needs can be summarized as follows: a) the need for secondary education designed for boys of above-average ability;) the need for secondary schools structured according to the classical liberal arts tradition, yet streamlined to meet the demands of a technological age; c) the need to transmit the cultural heritage to the next generations in such a way that information is linked with personal guidance, knowledge with values, understanding of the world with an understanding of man, his natural potential and his God-given call in today's world.

Thus, the Cistercian curriculum seeks to establish a balance between intellectual and personal, moral education, aims at developing the emotional and the social being alongside the intellect, and through its prescribed course of study trains all students using a structured core curriculum with equal emphasis in the humanities and the sciences. This core curriculum, compulsory for all students, includes every year a course in theology, social studies, mathematics, natural science, foreign language, and one or more courses in language arts. In addition, each student participates in physical education and/or athletics, receives supervision and guidance from his Form Master and participates in a number of school-sponsored activities, such as field trips, outings, retreats, parties and dances, and various specialized activities included in the program of the Upper School.

Before the rationale for the sequence of courses within each department is explained, it is important to emphasize that Cistercian considers the curriculum of its Middle and Upper Schools an integrated whole which achieves its purpose fully only for the student exposed to the whole sequence of its curriculum. Although the Middle and Upper Schools are separate in both organization and discipline, the student body receives instruction from the same faculty and the courses are aimed at achieving one common purpose.

The curriculum of the Upper School presupposes what is offered in lower grades, while the curriculum of the first years anticipates and prepares for what is offered on more advanced levels. Several of the courses in the Middle School, especially in the Third and Fourth Forms, cover material that is elsewhere routinely taught at the high school level. Thus, compared to the traditional junior and senior high school programs, ours is increasingly accelerated and, in fact, culminates in college-level courses and the opportunity to earn a substantial amount of college credit by the time of graduation from Cistercian.

COLLEGE CREDIT PROGRAM

The entire Cistercian curriculum is, in effect, an honors program. By their senior year students do college-level work in their Cistercian courses. Through an agreement with the Dallas County Community College District, Cistercian students earn college credit for their English, government, science, and calculus courses. Cistercian graduates routinely begin their college career with 29 college credits.

SENIOR PROJECT

In the Fourth Quarter of Form VIII, each senior completes a Senior Project. The projects provide the opportunity for learning with greater independence and personal responsibility. They require individual decision-making and responsibility at several stages: selecting a project, planning an approach, scheduling conferences with the faculty supervisor, and meeting deadlines. When conscientiously completed, the projects enable the seniors to anticipate that learning style which will characterize their college years. Projects have ranged from a traditional research paper on World War II aircraft to an internship in a local hospital.

REQUIRED COURSES IN THE MIDDLE SCHOOL

FORM I (GRADE 5)

Subject	No. of Weekly Periods
Religion	3 (2 periods plus class Mass)
English	4
English Lab	3
Latin	3
Social Studies	4
Mathematics	5
Computer	2
Earth Science	4
Art	2
Music	2
P.E.	4

FORM II (GRADE 6)

Subject	No. of Weekly Periods
Religion	3 (2 periods plus class Mass)
English	4
English Lab	3
Latin	3
Social Studies	4
Mathematics	5
Computer	2
Life Science	4
Art	2
Music	2
P.E.	4

FORM III (GRADE 7)

Subject	No. of Weekly Periods
Religion	3 (2 periods plus class Mass)
English	4
English Lab	2
Latin	4
Texas History/Geography	4
Mathematics	5
Physical Science I	4
Health	2
Art	2
P.E.	4

FORM IV (GRADE 8)

Subject	No. of Weekly Periods
Religion	3 (2 periods plus class Mass)
English	4
English Lab	2
Latin	4
American History	4
Algebra I	5
Physical Science II	4
Health	2
Art	2
P.E.	4

REQUIRED COURSES IN THE UPPER SCHOOL

FORM V (Grade 9)

Subject	No. of Weekly Periods
Theology I	3
English I	5
Foreign Language I	5
World Civilizations and Cultures I	4
Geometry	5
Biology I	5
Elective	2
P.E./Athletics	3

FORM VI (Grade 10)

Subject	No. of Weekly Periods
Theology II	3
English II	5
Foreign Language II	5
World Civilizations and Cultures II	4
Algebra II/Trigonometry	5
Chemistry I	5
Elective	2
P.E./Athletics	3

FORM VII (Grade 11)

Subject	No. of Weekly Periods
Theology III	3
English III	5
Foreign Language III	5
American History	4
Precalculus Mathematics	5
Physics I	5
Elective	2
P.E./Athletics	3

FORM VIII (Grade 12)

Subject	No. of Weekly Periods
Theology IV	3
English IV*	5
American Government*	4
Calculus*	5
Biology II*/Chemistry II*/Physics II*	6
Foreign Language IV	3
Elective (3 quarters)	2
Senior Project (4th quarter)	4
P.E./Athletics	3

For those courses in Form VIII marked with an asterisk students receive credit through the Dallas County Community College System. These core courses continue throughout the year; the others terminate at the end of the Third Quarter.

REQUIRED COURSES FOR GRADUATION

Graduation requirements are the following:

Subject	**Credits**
Theology	2
English	4
Foreign Language	3 ½
Social Studies/ Fine Arts	4
Mathematics	4
Science	4
Electives (+ Senior Project)	2 ½
P.E./Athletics	2

One credit, a Carnegie unit, is granted if a course is taken for a full school year in four or five weekly periods, one half credit if it meets for two or three weekly periods. The School requires that all students participate in its religious education program.

RELIGION

The Religion courses in the Middle School are designed to offer a solid foundation in the basic teachings of Christianity and to provide an introduction to both the Old and New Testament scriptures. These courses are taught on the explicit basis of the School's Catholic identity yet in an ecumenical spirit. Thus, all students may fully profit from them, and the Catholic students may receive training, encouragement and guidance in the understanding and practice of their faith. Because of the various backgrounds of the students entering the First Form (both of the Catholics and the non-Catholics), the program starts with two years of catechetical instruction. In the first year basic doctrine, structured according to the Apostle's Creed, is studied. In the second year students learn about living the Christian faith, that is, Christian morality and the Church's worship (sacraments and liturgy). The Bible courses in the Third and Fourth Forms introduce the students to both reading and the interpretation of the biblical texts, acquainting them with the necessary historical introductions and guiding them through the most important texts of both testaments. The School requires that all students participate in its religious education program.

Form I

Religion (3 weekly periods)
The framework of this course is the Apostles' Creed. Its trinitarian structure offers the following division of topics:

a) "I believe in God": creation of the universe and of man, man's dignity and sinfulness (original sin), the divine call for communion with God that is addressed to all people.
b) "I believe in Jesus Christ": Christ's divine and human nature, his earthly life, passion and resurrection; Christ as our Lord in worship and daily life, his presence in our personal lives.
c) "I believe in the Holy Spirit": the Spirit as source of sanctification and truth in the Church and through the sacraments.

Throughout the course the relationship between teaching and life, doctrine and practice are pointed out to help the students to participate better in the Church's sacramental life and develop their own life of prayer.

Form II

Religion (3 weekly periods)
The study of the sacraments started in Form I is reviewed and completed. Following this, the different topics related to Christian living are discussed, primarily conscience, divine law, Christian love (the love of God and of neighbor). The framework of the Ten Commandments is used and expanded to include all the main aspects of Christian morality.

Form III

Religion (3 weekly periods)
After a chapter on introductory biblical concepts, this course offers a survey of the Old Testament. The history of revelation from Abraham to the Exile is discussed with readings from the biblical texts themselves. In addition to an historical interpretation of the original texts, the Christian way of interpreting the Old Testament is constantly used and explained.

Form IV

Religion (3 weekly periods)
This course acquaints the student with the books of the New Testament, especially the four gospels and the Acts of the Apostles. Emphasis is placed on a realistic presentation of the historical background of the New Testament and on enabling the students to interpret the well-known stories of the gospels in their context, both historical and literary. Special effort is made to relate the message of the Scripture to modern life situations, and to the faith and morality of the students.

LANGUAGE ARTS

The Language Arts program in the Middle School provides a solid foundation in the use and understanding of the English language. While the entire curriculum develops reading and writing skills insofar as they are the vehicles of learning, the Language Arts program has as its particular goal the development of skills in communication, including public speaking. The program is implemented in two series of courses, English and English Lab, offered for a total of six or seven class periods per week. In English Lab, the correct use of language is taught through the study of spelling, punctuation, and capitalization. The students also learn about the structure of English through the study of traditional grammar and the practice of diagramming. Frequent writing assignments, usually narrative or descriptive, complement the study of language. In the English course, students enhance their reading comprehension skills through the study of significant works of literature accessible to young readers. Emphasis is also given to written expression in all the rhetorical rmodes, a systematic study of vocabulary, and research skills. Nurturing the students' creativity, teachers of English and English Lab encourage their students to audition for the Middle School play and to submit their original literary works in several contests, especially in Cistercian's own literary competition.

Form I

English (4 weekly periods)
In Form I the English curriculum begins with a discussion of Greek mythology and then proceeds through C.S.Lewis's *Chronicles of Narnia*. At different times during the year, the boys will break from their study of the *Chronicles* to read poetry and learn to write several kinds of poems. In studying the *Chronicles of Narnia*, the boys will practice close reading, learn how to interpret a text, and develop their ability to make a connection between what they read and how they live. The writing exercises in Form I focus on writing a well-developed paragraph. The boys begin to learn research skills by doing a short project involving both the school library and the Internet.

English Lab (3 weekly periods)
Because of the diverse educational backgrounds of the students in Form I, the course is intended to provide a common ground on which to build the sequential study of grammar and mechanics in Forms I-IV. The teacher teaches or reviews the parts of speech, the simple and compound sentence, verb and pronoun usage, capital letters, and punctuation. Diagramming enhances their understanding of sentence structure. Dictionary use and rules of spelling are reviewed. Writing assignments are integral to each unit.

Form II

English (4 weekly periods)
In Form II the students are encouraged to read closely and to write concisely and accurately about the books they read. The reading curriculum centers on J.R.R. Tolkien's *The Lord of the Rings* and Mark Twain's *The Adventures of Tom Sawyer*. To supplement their reading of Tolkien's work, students learn about Western medieval culture and the origins of the English language. Along with writing short critical essays, students keep a creative writing journal in which they model Tolkien's literary techniques. In response to Tolkien's critique of the machine, students do a short research project focused on technology, a project that familiarizes students with basic research skills.

English Lab (3 weekly periods)
Students continue to build on skills introduced in Form I. They review as needed the parts of speech and the sentence. Complements, phrases, and clauses are introduced, and the students begin work with complex sentences and verbal phrases. Diagramming, spelling, and complementary writing assignments are continued. Units in mechanics focus on the comma, semicolon, apostrophe, and italics.

Form III

English (4 weekly periods)
In Form III students become more sophisticated writers. They focus on schemes for writing fully fleshed out responses, and they learn to organize ideas to achieve fluidity and clarity. Keeping a writing portfolio allows them to evaluate their writing several times a year. They write original pieces, literary analysis, paraphrases, summaries, and a full process compare/contrast research paper. The students read works grouped within the thematic emphases of "Greed vs. Chivalry" and "Noble vs. Ignoble Motive." The works draw on Arthurian legend, political satire, the crime and detection story, the adventure novel, and poetry. Third Formers dramatize Shakespeare's *Julius Caesar*, study vocabulary systematically, and participate in a mock trial.

English Lab (2 weekly periods)
Students develop their sentence-building skills as they proceed through the study of verbals and clauses. They write simple, compound, complex, and compound-complex sentences and practice diagramming to reinforce their understanding. They demonstrate mastery of course objectives in practical and creative writing assignments.

Form IV

English (4 weekly periods)
In Form IV the students continue to develop their ability to analyze literature and write critical essays. Coinciding with the study of American history, the students study poems, short stories, and nonfiction essays centered on the theme of the American hero. Students also will read longer works selected to illustrate the theme of coming of age, such as *Great Expectations* and *To Kill a Mockingbird*. In the course of these studies, students will learn a number of poetic forms and will write a variety of compositions, creative and analytical. Vocabulary study in Fourth Form utilizes the students' knowledge of Latin by placing an increased emphasis on etymology. Students continue to refine their research skills through a project involving both the school library holdings and the Internet.

English Lab (2 weekly periods)
Students are expected to push toward mastery of verb and pronoun usage, subject-verb and pronoun-antecedent agreement, modifiers, verbal phrases, clauses, and sentence structure. Their diagramming skills keep pace with their more sophisticated sentence-building skills. The rules of mechanics continue to be stressed. In a variety of writing activities, students demonstrate their skills in effectively combining thoughts and punctuating correctly.

FOREIGN LANGUAGE

The Foreign Language program in the Middle School complements the Language Arts curriculum by introducing the students to a system of verbal communication very different from their native English. Latin has been chosen as the required foreign language throughout the Middle School for several reasons. First, the study of Latin helps the students see how a text's grammatical structure yields its meaning. The study of Latin also expands, deepens, and reinforces their English vocabulary. Furthermore, it serves as an effective introduction to the study of any inflected language, particularly the modern European languages offered in the Upper School. Finally, the study of Latin opens up to the students the cultural wealth of Western civilization from ancient Rome through the Middle Ages and the Renaissance.

Form I

Introduction to Latin (3 weekly periods)
This course has a twofold purpose. It prepares the student for the study of a foreign language by teaching the fundamental grammatical categories. The course also makes them aware that different idioms exist, specifically that the English language has been influenced and modified by Latin vocabulary and grammar. Although the formal coverage of Latin will be modest, the student is taught at every step to use his knowledge of Latin to improve skills of English spelling, vocabulary and grammar. Some introduction to ancient mythology is also included.

Form II

Latin II (3 weekly periods)
In Form II the students begin their formal study of Latin. Using *The Oxford Latin Course*, they cover nouns and adjectives of the first three declensions, personal and demonstrative pronouns, and the present tense of the four conjugations. Their reading introduces them to Quintus Horatius Flaccus, Rome's greatest lyric poet, and the world in which he lived. Simple Latin conversations based on the Latin readings as well as library research projects supplement the memorization of vocabulary and grammatical forms.

Form III

Latin III (4 weekly periods)
In Form III the students add nouns of the fourth and fifth declensions and relative pronouns. They also cover all tenses of the indicative mood in the active voice for all four conjugations. The students continue to follow the events in the life of Horatius, especially the Fall of the Roman Republic. They supplement their Latin readings with exercises in spoken Latin and research projects.

Form IV

Latin IV (4 weekly periods)
In Form IV students begin with a review of grammatical forms and concepts learned in the previous two years. They then learn the passive voice and begin the study of the subjunctive mood, the ablative absolute, and the indirect statement. The Latin readings continue the story of the late Republic and the establishment of the empire under Augustus. Excerpts from Horace's own lyrics as well as selections from other Latin authors are introduced in the second semester. By the end of the course students are ready for Latin electives in the Upper School that are primarily reading courses in original Latin.

SOCIAL STUDIES

The Social Studies program in the Middle School moves from a general description of history and geography of the students' own world to a more formal introduction to the methodology and subject matter of social studies. History and geography are studied together as an integrated discipline. While students are required to master basic factual material, the ultimate aim of the program is to lead students to critical reflection on the political, economic and social forces that shape human society. The first two courses treat the Western (Form I) and the Eastern hemispheres (Form II). In the Third Form students study the geography and history of Texas, and in the Fourth Form they examine American geography and the history of the United States.

Form I

United States History (4 weekly periods)
This course focuses mainly on the history of the United States from its earliest beginnings to the present while acquainting students with various skills such as usage of maps, time lines, tables, and flowcharts. Students will also learn how to outline, prepare an oral report, and interpret political cartoons. The course highlights the multicultural nature of our country. The study of geography begins with the capitals and states as well as the important land forms of the United States.

Form II

World History (4 weekly periods)
Students in this course undertake a broad survey of the history of the world from the earliest civilizations of the Fertile Crescent to those of the twentieth century. The bulk of the course is spent concentrating on the military and political histories of the people of various regions, while special emphasis is placed on regional cultural expressions seen in the development of language, religious rituals, and art. Formal geographic survey continues what was begun in regard to it in Form I. One formal paper is presented on an assigned topic in the fall.

Form III

Texas History (4 weekly periods)
In this course students investigate the entire history of Texas. Beginning with the study of the early Indians, students trace the European exploration of Texas, Anglo-American interests in the region, the causes and course of the Texas Revolution, the development of the Republic, the early statehood of Texas, the state's role in the Civil War and Reconstruction, and finally the state's agricultural, industrial, and urban growth. Independent study is required in the form of book reports and one oral report on an assigned topic. In the spring the students are required to participate in a three-day field trip to Austin and San Antonio.

Form IV

The Founding of America (4 weekly periods)
This foundational course is an in-depth study of American History from exploration to the end of the Reconstruction Period. After considering colonization, revolution, and a failed attempt at nationhood, the students will complete a detailed study of the Constitution. The growth of American democracy will then be traced up through the Civil War. Finally, in the study of the Reconstruction Period, students begin to see the basic political, economic, and social foundations of modern America. A comprehensive study of U.S. geography will accompany a consideration of the nation's past. In addition to the textbook, material for the course will include primary sources, important documents, photographs, paintings, charts, graphs, and films.

MATHEMATICS

The Mathematics program in the Middle School strives to achieve four central purposes: to provide a strong foundation in the arithmetic and algebra of integers, rational numbers, and roots; to develop an informal but reasoned understanding of geometry; to instill a disciplined yet flexible approach to solving non-routine problems; and, in the last year especially, to introduce formal deductive reasoning from axioms and definitions, using some basic set theory. Many topics recur, each time with increasing depth and sophistication. The Fourth Form Algebra I class provides the necessary preparation for the accelerated mathematics program in the Upper School.

Form I

Mathematics (5 weekly periods)
This course assumes that the first formers are competent and comfortable using whole numbers in the four basic operations. It introduces students to rational arithmetic and the fundamentals of number theory so that students can begin to work with fractions and decimals in computation. Fundamental geometric concepts and applications involving perimeter, area, and volume are part of the course. While the topics of ratio, proportion, and percent are introduced, solving equations and working word problems with integers, fractions and decimals are emphasized. The great range of topics as well as the introduction of a variety of problem solving strategies encourages creative mathematical thinking throughout the course.

Form II

Mathematics (5 weekly periods)
The rational arithmetic taught in Form I is first reviewed and then expanded. Two major areas of expansion are decimal fractions and percentages. Number theory is further developed to include primes and prime factors, the greatest common divisor, and the least common multiple. These concepts are then used for more efficient computation. Particular emphasis is placed on the formal development of the real number system, the real number properties (closure, the commutative, associative, distributive properties, and the identities and inverses) and their use in computation and problem solving. The informal geometry begun in Form I is extended to include a concentrated study of the triangle. The study of negative numbers, the Cartesian plane, and a large number of science-related word problems carry this course considerably beyond elementary arithmetic.

Form III

Mathematics (5 weekly periods)
This course has a twofold objective: a) to conclude the study of rational arithmetic, informal (intuitive) geometry and number theory, and b) to introduce the student to algebra. Its content, therefore, includes the explicit treatment of the rational number field, using and stating its basic properties and applying them to both a final review of the arithmetic of fractions and introductory exercises in solving linear equations and inequalities. Rational arithmetic is studied in three modes: with common fractions, decimals, and percentages. Using informal reasoning with precise terminology, fundamentals of geometric figures are taught, including areas and volumes, as well as an introduction to coordinate geometry and properties of right triangles. Counting and probability problems are covered at a greater depth, including combinations, permutations, and the basic rules of probability.

Form IV

Algebra I (5 weekly periods)
This course in algebra begins with an axiomatic approach to the study of the real number system. The properties of the real numbers so derived lead to algorithms for the solution of linear and quadratic equations as well as inequalities. In anticipation of the second course in algebra the concept of function is carefully presented and linear functions are characterized.

The algebraic skills devoted to the simplification of mathematical expressions are introduced first for numerical expressions and then are steadily expanded to include polynomial and rational expressions. The working of various kinds of word problems illustrates the effectiveness and efficiency of algebra as a language for stating problems and then simplifying them to known forms for the solution of which algorithms are available. Throughout this course the emphasis is placed on correct reasoning. This emphasis is supported by the appropriate use of set terminology and proofs. Algebra I is a prerequisite for entering the Upper School.

SCIENCE

The Science program of the Middle School provides an introduction to the understanding and use of the scientific method and prepares the students for their high school courses in biology, chemistry, and physics. In order to achieve this goal, the program begins with an earth science course as a first introduction to processes used in the natural sciences: observation, experimentation, collection and recording of data, and the formulation and testing of scientific hypotheses. In Second Form, life science capitalizes on the boys' natural curiosity about living things and provides an informal, mostly descriptive approach to the world of plants and animals. The science courses in the Third and Fourth Forms treat concepts of physics and chemistry in an increasingly rigorous way by applying mathematical formulas, graphs and other abstract models to the description of physical processes.

Form I

Earth Science (4 weekly periods)
The first course in science is devoted to an overview of the world and the universe in which we live. Students learn about the components of the universe, especially our solar system, the geologic history and the composition of the earth, and the geologic activity that characterizes our home planet. In the course of this year, they learn to observe and record data, to design simple experiments, and to work with units in the metric system.

Form II

Life Science (4 weekly periods)
This course provides students the opportunity to learn about the fascinating world of living things, drawing upon the students' natural curiosity about the wonders of biology. Students learn about concepts that reveal the unity of the natural world, such as the cellular nature of organisms, basic genetics, and ecological relationships. They are also challenged to discover and appreciate the diversity of organisms in their own environment and in the biosphere. In the laboratory, students are taught the proper use of the microscope as well as laboratory and field skills, which include techniques of sample collection, identification, organization and classification.

Form III

Physical Science I and Computer Science (4 weekly periods)
The purpose of this course is to lay a foundation for the physics curriculum in the Upper School. Students are introduced to the major topics of mechanics, sound, light, heat, and electromagnetic radiation. Emphasis is placed on problem solving and relating science topics to everyday life. Students continue to develop their ability to work in the units of the International System (metric system) and learn the calculator skills needed in the application of mathematics to the understanding of the physical universe. Observation, control, and measurement of physical variables play an important role in the laboratory component of this course.
Students periodically work in the computer lab, using applications that allow them to represent graphically their data and to investigate topics such as electronic circuitry and rocketry via computer simulation. Students will have at least one major at-home project, typically building a model rocket that is launched at school, while students take data to determine the maximum altitude of the rocket.

Form IV

Physical Science II (4 weekly periods)
This course serves as in introduction to the chemistry course in the Upper School. It emphasizes the role of chemistry as central to all the other sciences. Students learn about the nature and kinds of matter, and the structure of the atom. They also become familiar with the Periodic Table of Elements and the properties it reflects. Basic chemical nomenclature and reactions are studied. The laboratory component of this course emphasizes proper scientific procedure, especially in the realm of accurate measurement and the use and understanding of significant figures. Students use computer applications such as Powerpoint, Word, and Excel to present scientific data and information.

COMPUTER SCIENCE

The goal of computer instruction in the Middle School is to prepare students for the variety of ways in which computers will be used in their academic careers. Thus, throughout the four-year Middle School program, students learn keyboarding skills, elementary programming, the use of both general application software and software specific to particular disciplines, and an appropriate use of Internet resources.

Form I

Computer (2 weekly periods)
Students begin their computer studies at Cistercian with an introduction to keyboarding and Microsoft Office. Students then learn introductory computer programming through the use of Logo software. In this first year, students learn to create basic shapes, control movement, and assign and manipulate variables as they design simple programs.

Form II

Computer (2 weekly periods)
This course continues the introductory Form I course. Regular typing tests encourage students to maintain the keyboarding skills they acquired in Form I. Students continue to work with Logo, learning more complex programming concepts, including the use of lists, random selection, recursion, and interactive programs, and how to create original games. Selective math topics, such as graphics on an XY coordinate system, are reinforced using the computer. Students also use word processing, spreadsheets and computer graphing.

FINE ARTS

The formal aesthetic education of the students in the Middle School is provided through art and music classes. First, two class periods a week are given to art. The main objective in the Middle School is to develop the skills for discovering visual relationships in the environment. Varied media and techniques are used to manipulate and organize visual perceptions according to the abilities of the pupil. An introduction to our visual art heritage is also presented through lectures and slides. Finally, the importance of self-discipline in the care and use of materials is emphasized. Second, in Forms I and II Music courses are offered as well. The Music program introduces the students to the basics of music theory and trains them in the appreciation of the great works of music in the Western tradition. The program prepares the students for special choral and instrumental presentations.

Form I

Art (2 weekly periods)
In Form I the students are introduced to tactile and visual relationships. The art works of individual students are discussed and evaluated for a better understanding of art. Elements of design are emphasized. Experiments with different media such as drawing, collage, printmaking, and sculpture round out the program.

Music (2 weekly periods)
Throughout this year the students concentrate on the basic elements of music theory. They learn how to read and write music. They are also challenged with some "ear training," including rhythmic dictation and interval recognition. During the second semester, much time is spent listening to the music of the great composers and recording observations in a music journal. By the end of their first year, the students have mastered the basics of music theory and have learned how to listen to and appreciate fine art music of the past 500 years.

Form II

Art (2 weekly periods)
In Form II the students are guided in their aesthetic response to their environment, including natural and man-made objects as well as art objects. Studies in color theory, drawing, sculpture, and printmaking are also undertaken.

Music (2 weekly periods)
This year the students are ready to put into practice what they learned in music class the previous year. Recorder lessons begin on the first day of school, and practice continues until a performance at the Christmas concert. Other topics for the year include orchestral instruments -- how to recognize them by sight and by sound; a unit on a specific opera, culminating in a field trip to a Dallas Opera performance; and a major music history research project.

Form III

Art (2 weekly periods)
In their third year of art, students are encouraged to evaluate their own works of art both individually and as a group. Through critiques, they are led to learn an important character trait necessary for artistic creation: the constant search to change and improve. The students are encouraged to expand their perception of visual relationships, to create new personal symbols, and to understand the nature of their tools and materials. They practice contour and gesture drawing of the figure. Sculpture, printmaking, and painting complete the course. Students also begin a systematic study of the history of art.

Form IV

Art (2 weekly periods)
In Form IV the students continue their study of art history with an investigation of the works of contemporary masters. Students direct their curiosity to the careers and techniques of artists. In their own work students explore various forms of drawing, sculpture, painting, and printmaking.

HEALTH/PHYSICAL EDUCATION

In the Middle School health curriculum students cover the topics of nutrition, grooming, physical and mental health, human anatomy, and diseases. The negative effects of tobacco, alcohol and drugs are also studied.

To complement the education of the intellect, each student of the Middle School is required to participate in Physical Education four times a week. For First and Second Form students the physical education program provides intramural competition in seasonal sports, while in the Third and Fourth Forms they have the opportunity to participate in interscholastic competition.

Forms I & II

Physical Education/Health (4 weekly periods)
During the first two years at Cistercian all students are taught the discipline of team sports by participating in seasonal, intramural team competition without the added burden of prolonged practice sessions and traveling to game sights. Supervised games and recreation are part of this program. The basic elements of gymnastics, calisthenics, and proper diet are integrated into the curriculum.

Form III

Health (2 weekly periods)
Health in Form III teaches students the importance of a comprehensive approach to personal health through a study of the following topics: physical fitness, nutrition, personal hygiene and appearance, mental and emotional health, self-esteem, management of stress, and the avoidance of addictive behaviors.

Form IV

Health (2 weekly periods)
In Form IV Health students are introduced to the major organ systems of the human body, safety and first aid, and the nature and prevention of disease.

LIBRARY PROGRAM

The library program is an integral part of the academic life of the Middle School. In the First Form students are introduced to the school library and research skills. An orientation is conducted for first formers and new students in other forms during September. Further library instruction is accomplished through class visits and assignments. The librarian and volunteers work with students one-on-one and with whole classes as requested by teachers.

The First Form often uses the library for reading programs in English and for recreational reading. They also use the library's resources for science and history projects and reports. The Second Form uses the library in science, health, history, music and English classes. The Third Form typically uses the library to produce Texas history book reports, health reports, and to research science projects. In English class third formers utilize the library's resources for poetry units and other literature-based activities. Fourth Form Students continue to develop their research expertise by using the library for projects in Latin, English, physical science and religion.

All of these studies are supported and enriched by the library's collection of 23,000 print and nonprint resources, as well as online encyclopedias, periodicals and references -- a wealth of information offered by subscription to students through the Internet. The librarian and teachers not only demonstrate to the learner how to locate information in books and electronic sources but how to evaluate their findings critically.

THEOLOGY

The Theology program teaches students to apply systematic and rational inquiry to the data of faith. The first two courses treat basic Catholic Christian doctrine (Form V) and morality (Form VI). These courses dwell on central questions and issues and as such are suitable for all students. The particular Catholic character of the doctrine and its systematic presentation are also clearly stated with respect for both denominational boundaries and the spirit of Christian ecumenism. In Forms VII and VIII, special topics of theology are treated: Church history, world religions and their relationship to Christianity, and forms of Christian commitment. The School requires that all students participate in its religious education program.

Theology I (Form V; 3 weekly periods; ½ credit)
This course treats the fundamental articles of Catholic faith. Its main topics are organized into three areas. First, the human quest for God is discussed by surveying the witness of primitive religions and the contributions of philosophy. Second, the course considers God's self-revelation in Jesus Christ, the Christian teaching about man--his nature, creation and fall--and his redemption through Christ. Third, the class studies the Church and its redemptive function, extending the presence and grace of Christ in space and time.

Theology II (Form VI; 3 weekly periods; ½ credit)
This course on Catholic Christian morality investigates first the basic themes of Christian moral life: sin and forgiveness; the sacrament of reconciliation; the theological virtues of faith, hope and charity; prayer; and participation in the Holy Eucharist. The second part of the course studies specific moral issues, such as the parent-child relationship, friendship, sexual and social problems, and the sanctity of human life.

Theology III (Form VII; 3 weekly periods; ½ credit)
This course surveys the history of the Church from the beginnings up to the present. It examines the peaks and crises of her history, the unfolding of her doctrine and organization, her impact on our world, and the life and influence of some of her greatest saints.

Theology IVA (Form VIII; 3 weekly periods in Fall Semester; ¼ credit)
The course examines primitive religions and the major non-Christian religions including Hinduism, Buddhism, Taoism, Confucianism, Islam and Judaism. While learning to evaluate the non-Christian religions from a Christian perspective, the student will acquire a better understanding of his own Christian faith.

Theology IVB (Form VIII; 3 weekly periods in Third Quarter; ¼ credit)
The final theology course treats the physical, psychological, moral and religious aspects of marriage. The students also learn about the preparation for marriage, the growth of married love through conflicts and crises, and some basic principles for the education of children. A brief treatment of the religious and priestly vocations completes the course.

ELECTIVES IN THEOLOGY

Introduction to Philosophy (2 weekly periods; ¼ credit)
This course is designed to introduce students to the major themes of philosophy: freedom and morality, knowledge and certainty, man and society, God and the cosmos. Students will either study a collection of readings representative of the major thinkers in the history of philosophy, or they will concentrate on a single text. Possible thinkers for consideration are Plato, Aristotle, Augustine, Aquinas, Descartes, Locke, Hobbes, Rousseau, Hume, Hegel, Marx, Nietzsche, Kierkegaard, Heidegger, and Sartre.

ENGLISH

The English program in the Upper School develops the students' ability to understand, appreciate, and respond to the great works of our literary tradition. In a roughly chronological sequence, the courses not only complement the students' study of history but also provide the framework within which the shifting values and concerns of the various authors can be understood. Thus, the students first read selected works from classical antiquity (Form V), then follow the development of British literature (Form VI) and American literature (Form VII). The final year of the English program consists of a college-level course organized thematically. Throughout the program, students develop their ability to read and think critically, and then to express themselves orally and in written form. Through well-balanced English classes, teachers prepare students (some as early as Form VI) for the English Advanced Placement exams.

English I (Form V; 5 weekly periods; 1 credit)
The study of English in Form V centers on classical literature--clasical in subject and form. Through the studyof Greek mythology and the careful reading of *The Odyssey, Oedipus Rex*, and *Antigone,* students encounter the characters, stories, and themes which are central to their understanding, appreciation, and enjoymnent of Western Literature. These works, along with *Macbeth, A Midsummer Night's Dream,* and poetry, provide an introduction to the classical genres--epic, tragic, and comic. Formal studies in vocabulary and grammar, important in themselves, strengthen both written work and oral presentations. Of fundamental importance in Fifth Form

English is regular practice in writing--ranging from informal personal narratives to formal literary analyses and a well-structured, well-documented research paper.

English II (Form VI; 5 weekly periods; 1 credit)
English in Form VI centers on a chronological study of the most exciting and important works in British literature. Beginning with *Beowulf* and moving to the works of Chaucer, Shakespeare, and modern authors this survey includes the major writers of prose and poetry from all literary periods. The study of literature provides material for written literary analysis, research projects, and creative expression. The chronological study of literature allows the students to understand the development of writing in Britain from simple rhythmic narratives to more complex forms and styles. Writing assignments complement this historical development as the students come to appreciate the changing role and responsibility of the writer in relationship to his audience. Vocabulary and composition (with grammar study adapted to the needs of the class) are taught in an organized, systematic manner so that students can become sophisticated and interesting writers and speakers.

English III (Form VII; 5 weekly periods; 1 credit)
Students in Form VII study American literature. Authors commonly studied include Hawthorne, Emerson, Twain, Fitzgerald, Salinger, T.Williams, A. Miller, and various poets. A thematic emphasis draws commentary regarding moral ambiguity, the tensions between personal responsibility and freedom, and the need for courage in an incongruent world. Three student projects culminate in oral presentations: a collaborative research assignment requiring synthesis, an independent study of an American poet, and a creative multi-disciplinary presentation. Compositions include journal entries, personal narratives, literary analysis, full process research paper, and creative works. Students evaluate their writing by keeping a writing portfolio, and they study vocabulary systematically.

English IV (Form VIII; 5 weekly periods; 1 credit)
While English I-III investigate classical, British, and American literature respectively, English IV is organized thematically around the topic of "Man, Choice, and the Center of His World." Underlying this theme is an understanding of literature as an imaginative lens through which the student can explore the drama of man creating his personal world through individual choice. Significant works commonly used include Dante's *Inferno*, Marlowe's *Dr. Faustus*, Shakespeare's *Tempest*, Sartre's *No Exit*, and Solzhenitsyn's *One Day in the Life of Ivan Denisovich*. The course stresses analytical writing, class discussions, and the skills pertaining to literary criticism.

ELECTIVES IN ENGLISH

A sampling of some of the electives that are commonly offered includes the following:

Contemporary Literature (2 weekly periods; ¼ credit)
The English classes in Upper School concentrate on works that are generally considered classics in American, British, or world literature. These books have an acknowledged place in literary history. Each year, however, new works are published, and many of these contemporary pieces, while not yet "tested by time," display characteristics which indicate their merit as literature to be both read and studied. Through the study of award-winning novels (at least two), short stories, drama, and poetry, the class on contemporary literature introduces students to authors writing during the students' lifetimes.

Creative Writing (2 weekly periods; ¼ credit)
This elective will offer opportunities for expression in both poetry and short fiction. It will attempt to evoke a creative response to the various stimuli we are constantly presented with, whether we find those provocations in the natural world, in the more dramatically charged worlds of our friends and family, the broader, more abstracted worlds of politics and culture, or in the interior world of ideas, emotions, and convictions we carry about in our heads. The boys should possess a notebook which they are prepared to write in daily and should be prepared as well to write and read assignments for each class. They will be asked to work both in poetry and short fiction, though they may choose to emphasize one over the other.

Literary Criticism (2 weekly periods; ¼ credit)
This course offers a theoretical foundation for the study of literature. The students read selections in literary criticism from Plato to T.S. Eliot. They seek to understand how the great thinkers and poets of the past have answered the fundamental questions of literary criticism: What is the role of literature? How can a reader come to the meaning of a text? How can one categorize the various forms of literature?

Shakespeare's Sonnets (2 weekly periods; ¼ credit)
While the students gain a good understanding of Shakespeare's plays in the four years of Upper School, this elective offers them a chance to study in depth a part of the Bard's work only touched on in the curriculum. His 154 sonnets contain some of the best-known lines of poetry about the eternal themes of human love, Time's ravages, and the sadness of aging and death. Students will also come to know more about the history of the sonnet form from its beginnings in 13th century Italy to its development under Petrarch, Dante, and Spenser in the 14th-16th centuries, and up to its 20th century usage by Hopkins, Yeats, Millay, and others.

Special Topics in Literature (2 weekly periods; ¼ credit)
This course allows students to study works of interest that do not fall within the regular curriculum. It also provides the opportunity for a detailed study of a particular author, theme, or genre, including film. Varying in content from year to year, the course has been a study of novels by Dostoevsky, contempo-

rary drama produced locally, and religious themes in fiction.

Speech (Forms V & VI; 2 weekly periods; ¼ credit)
The speech course serves as an introduction to the basic forms of public address. After briefly examining the theoretical problems of public rhetoric, the course provides a schematic presentation of all the essential elements of public speaking. Students are required to give a number of speeches in class to demonstrate their progress in mastering these elements. Class participation and the ability to offer thoughtful, constructive critiques of others' work are other essential elements in this course.

FOREIGN LANGUAGE

Basing itself on the results of four years of Latin in the Middle School, the Foreign Language program in the Upper School provides the opportunity for the students to learn one of two major modern languages of the West--Spanish or French. As the most common language of the Western hemisphere, Spanish introduces the students to the language and culture of our closest non-English speaking neighbors as well as to the Hispanic heritage present in this country and around the globe. French is recommended not only for its important contribution to Western civilization but also as a recognized tool of research in all areas of the arts and sciences on the college level. In the foreign language courses, along with work in grammar and vocabulary, there is regular practice in oral and written expression. In the first two years students learn basic vocabulary and grammatical forms. In Forms VII and VIII the study of culture, history, and literature enriches the students' continued practice in translation and conversation.

SPANISH

Spanish I (Form V; 5 weekly periods; 1 credit)
The basic objective of this course is to lay the foundation for the four language skills of reading, writing, speaking, and understanding. Students will learn the present and preterit tenses of regular and irregular verbs. In doing so, Spanish is used as much as possible in the classroom. In addition to the actual study of the language, a secondary goal is to begin the student's acquaintance with Hispanic culture, history, and geography.

Spanish II (Form VI; 5 weekly periods; 1 credit)
The course continues Spanish I with its stress on speaking and listening skills. New emphasis, however, is placed on written composition. Students will learn all the verb tenses of the indicative mood and begin their study of the subjunctive mood and its uses.

Spanish III (Form VII; 5 weekly periods; 1 credit)
At this level, the emphasis shifts to reading and writing, while providing a summary and review of Spanish grammar and usage. Speaking and listening skills are sharpened by discussion of current events and other topics of interest. In reading, the aims are to enlarge vocabulary and increase appreciation of the written language. In order to improve composition skills, a rigorous writing program is introduced. This and the following year's course are designed to prepare students for the AP exam in Spanish language.

Spanish IV (Form VIII; 3 weekly periods; ½ credit)
Spanish IV provides the student with an introduction to literature through a study of both established masterpieces and contemporary works. The students will develop their written and verbal skills through analytical essays and oral presentations.

FRENCH

French I (Form V; 5 weekly periods; 1 credit)
With French used in the classroom as much as possible, students in their first year establish the foundation for understanding and speaking French. They cover the present, imperfect and *passé composé* tenses of regular and irregular verbs in the indicative mood as well as the imperative mood. They also become familiar with the French use of adjectives and pronouns.

French II (Form VI; 5 weekly periods; 1 credit)
While continuing to develop their speaking and aural comprehension skills, students in their second year begin composing more sophisticated texts in French. They also learn the future tense of the indicative mood and take up the study of the conditional and subjunctive moods.

French III (Form VII; 5 weekly periods; 1 credit)
In the third year students continue to build their vocabulary and familiarity with French idiom. They finish their study of the French verb's tenses and moods, learning the *future antérieure*, *passé simple*, *plus-que-parfait*, and *conditionel du passé*. Students begin a survey of French history and culture with an introduction to significant literary, artistic and architectural achievements as well as important developments in science and politics.

French IV (Form VIII; 3 weekly periods; ½ credit)
In the fourth year students are introduced to selections from important French authors as well as from current French-language newspapers, obtained primarily from the Internet. Further work is done on speaking and listening proficiency, composition skills, and grammar.

ELECTIVES IN FOREIGN LANGUAGE

Conversational Spanish (2 weekly periods each semester; ¼ credit)
The course consists of fifty-two video episodes. The video series *Destinos* is used as well as photocopied selections to

increase proficiency in aural comprehension, sight-reading, and conversation. The course also aims at enriching cultural knowledge. Prerequisite: Two semesters of Spanish and permission of the instructor.

Second Foreign Language (2 weekly periods each semester; ¼ credit)
A regular elective course in Spanish, French, German, Latin, or Greek is provided on the beginning level if requested by at least 8 students, on a more advanced level (i.e., as the continuation of a course previously offered) if at least 6 students sign up. A Guided Reading, non-credit program is also available for students desiring to study one of the foreign languages listed above if there are not enough students to establish a regular elective course. This program may be organized as an independent study, with two 30-minute meeting per week with the teacher.

SOCIAL STUDIES

As in the Middle School, the Social Studies program of the Upper School coordinates the study of history and geography. In Forms V and VI students study World History. In Form VII the study of American History is continued. After gaining a thorough knowledge of the facts, students go on in each course to examine their context and significance. They learn how to read historical material analytically and critically, to weigh historical evidence and interpretations, and to arrive at conclusions on the basis of informed judgment. Thus, all three history courses provide an excellent preparation for students to take the Advanced Placement Exam. In Form VIII students take two courses in American government for college credit.

World Civilizations and Cultures I (Form V; 4 weekly periods; 1 credit)
The course is designed to immerse the student in the serious study of history. As such, it comprises an investigation of the men, ideas, events, and ways of life that have had a substantial impact on the course of human affairs. The first semester will commence with an examination of civilizations in the ancient Near East and conclude with a look at Alexander the Great and his vast empire. The second semester will pick up the inquiry with the founding of the city of Rome and close with an introduction to the civilization of Europe during the early Renaissance. In coordination with the Fine Arts department, students also study the history of art, broadening their understanding of the various civilizations and of the fine arts in general. The cultivation of the student's understanding of history will take place with a view to furthering his grasp of human nature and character. Instruction will foster careful reading, attentive listening, clear and coherent writing, reflective and orderly thinking, and thoughtful, articulate speaking.

World Civilizations and Cultures II (Form VI; 4 weekly periods; 1 credit)
Students continue what they have begun in Form V's survey. Advancing into the Modern and Post-modern ages, students spend a great deal of time discussing the socio-political ideologies underlying many of the conflicts brought under scrutiny in this course. In biweekly presentations, special attention is paid to the cultural expression of the musical and visual arts evolving during the epochs studied. Primary source readings accompany class lectures and lead to class discussions. Students write formal weekly essays and give one brief lecture per semester on an assigned topic.

American History (Form VII; 4 weekly periods; 1 credit)
The study of U.S. history at this level is a survey course covering the entire development of American history. Students follow a chronological approach, and consider political, Constitutional, economic, social, cultural, and diplomatic topics of this nation's past. A consideration of historical periods and a thorough study of U.S. geography plus supplemental world maps will complement textbook materials. Primary sources, historical articles, historiographic essays, photographs, paintings, and films will also be used.

American Government (Form VIII; 4 weekly periods, 1 credit)
This course is chiefly concerned with developing the student's understanding of those principles on which the American government is founded. The means to this end is a careful and thorough study of those documents that are generally considered to be of seminal importance for the formation of our political institutions and way of life. To lay the groundwork for a fuller understanding of these documents, the course commences with a look at those authors whose writings either directly shaped the thinking of our Founding Fathers, or whose thought provides us with fundamental alternatives to their understanding of political life. Students will also investigate how the fundamental principles laid out by the Founders have been put into practice in the actual functioning of the three branches of our national government. With sustained effort the student should attain a reasonably coherent grasp of the principles of American government, of the philosophical understanding of human nature that undergirds these principles, and of the structure and functioning of the American regime and its components.

ELECTIVES IN SOCIAL STUDIES

Civil War (Forms V-VIII; 2 weekly periods; ¼ credit)
After an introductory unit concerning the development of slavery in the United States, the course will focus mainly on the military aspects of this country's greatest conflict. Each student will be responsible for information concerning a Civil War general, a period weapon, and a major battle. Besides lectures

and discussion sessions, students will view the well-regarded, multi-volume series on the Civil War produced by Ken Burns. The elective will close with a consideration of the immediate and long-lasting results of that conflict.

Economics I (2 weekly periods; ¼ credit)
Economics I serves as an introduction to the science of economics. Topics of study include the laws of supply and demand, basic market structures, various business organizations, and the common causes and measures of economic growth. Students also study the principles of different kinds of economic systems, including an examination of the fundamental beliefs which support those systems.

Economics II (2 weekly periods; ¼ credit)
Economics II continues the study begun in Economics I. Students study money, banking and the Federal Reserve system. In addition, they look at the basic principles of investment, followed by a simulated exercise in which they make their own investment decisions. Finally, students consider the pros and cons of using credit and borrowing money.

Lives of the Saints (2 weekly periods; ¼ credit)
The aim of this course is to better acquaint the student with those who, as believers in Jesus Christ, have lived lives of heroic virtue. Biographical and autobiographical readings highlighted by theological definition and distinction will dominate this survey. Student presentations will provide a "Saint of the Day" to be remembered and considered in this round table seminar.

Psychology I (2 weekly periods; ¼ credit)
This study of the "science of behavior" is conducted in a topical fashion. After initial lectures concerning the history and development of psychology, students first investigate the areas of motivation and emotion, and then focus their attention on the processes of perception and memory. The course concludes with a study of social psychology. Material for this course is drawn from an elementary psychology text, magazine articles, films, recent television productions and several simple experiments.

Psychology II (2 weekly periods; ¼ credit)
This course focuses on human development. Development is studied in three stages—childhood, adolescence, and adulthood. The students approach this study through a consideration of "developmental tasks" which must be accomplished in order to achieve psychological maturity.

Rhetoric and the Human Person (2 weekly periods; ¼ credit)
This course is designed to introduce the student to a classical, Aristotelian understanding of rhetoric. Students will be trained to "see the available means of persuasion" and then through that channel captivate or move an audience. To that end each student will engage in literary, verbal, and physical activities useful for molding an orator comfortable in various public speaking fora.

Thomas More and the Northern Renaissance (2 weekly periods; ¼ credit)
According to William Shakespeare, Thomas More was the Englishman in the Renaissance who most perfectly embodied the "marriage of wit and wisdom." To Jonathan Swift, he was "the person of the greatest virtue these islands [Great Britain] ever produced." And John Donne longingly remembered him as the "man of the most tender and delicate conscience that the world has seen since [Saint] Augustine." In this course, students read and discuss selections of the *Utopia*, original letters, and poems penned by this patron saint of statesmen in order to appreciate more fully one of the greatest minds and souls ever to grace the Western World.

World War II in the West (2 weekly periods; ¼ credit)
Students will examine the course and causes of the Second World War in the West, that is, the war in Europe and European Russia, North Africa and the Mediterranean, and Great Britain and the Atlantic. The course will focus on the political and diplomatic developments of the war (including the various alliances Lend-Lease, the Atlantic Charter, Casablanca, Yalta, Potsdam) as well as on the modes of warfare characteristic of the conflict in the West (tank warfare, airborne operations, amphibious operations, and strategic bombing). Critical episodes including the Battle of Britain, El Alamein, Stalingrad, the Normandy Invasion, and the Battle of the Bulge will be examined from tactical and strategic vantage points. Further, the final phase of the war will be considered with a view to understanding the immediate origins of the Cold War.

MATHEMATICS

The Mathematics program in the Upper School is based on the completion of Algebra I in Form IV, a prerequisite for admission into the Upper School. The first three courses in the Upper School Mathematics sequence, Geometry, Algebra II, and Precalculus, are designed to complete a solid background in elementary -- that is, non-calculus -- mathematics. In Geometry students discover the full power of the mathematical method by unfolding through clear proofs and definitions the basic results of the subject. In Algebra II they complete their mastery of symbolic manipulation as they are introduced to the classical functions, including exponential and trigonometric functions. The course in precalculus completes the topics required for calculus as well as other undergraduate mathematics courses, including topics from matrix theory and combinatorics. Calculus completes the mathematics program, giving students a first look at how dynamic processes may be understood using mathematics.

Geometry (Form V; 5 weekly periods; 1 credit)
This course is a systematic treatment of topics in plane and solid Euclidean geometry. Primary emphasis is placed on developing the reasoning skills necessary to understand and create deductive proofs based upon axioms and previously proven theorems. The concepts developed in the course are applied to algebraic problem solving (analytic geometry) and classical geometrical constructions. The mathematics of the Cartesian Plane studied in Algebra I is united with geometrical ideas by means of coordinate geometry. Time permitting, additional topics in logic and alternative geometries are also presented.

Algebra II/Trigonometry (Form VI; 5 weekly periods; 1 credit)
This course further develops the content of the introductory algebra taught in Form IV. The approach is more rigorously axiomatic as it can draw on the student's exposure to such an approach in geometry. Topics covered include the properties of real numbers, linear functions, polynomials and quadratic and rational functions and relations. The conic sections are given a systematic development from the viewpoint of the rectangular coordinate system. An introductory study is made of the logarithmic and the exponential functions. Emphasis at all times is on the functional aspect of mathematics, and the developments are constantly viewed from both the algebraic and the geometric standpoints.

Precalculus (Form VII; 5 weekly periods; 1 credit)
Algebraic concepts and skills obtained in previous courses are reviewed and expanded on the basis of more formalized and rigorous proofs. With constant attention to graphing functions, the course expands the student's knowledge of analytical geometry. The course prepares the student for studying calculus, while reviewing and extending his knowledge of algebra, geometry, and trigonometry. It is organized as a course on elementary functions, starting with the general concepts and properties of a function (domain and range, composition, inverses, continuity, etc.) and applying them to each of the following: polynomial and rational functions, exponential and logarithmic functions, trigonometric functions and their inverses, sequences and series (with some probability and combinatorics). A comprehensive treatment of the conic sections is given which both reviews and builds on that taught in Form VI. Specifically, the conics are developed from the polar standpoint and then related back to the rectangular development given in Algebra II. Additional topics in linear algebra and the complex number system complete the course.

Calculus (Form VIII; 5 weekly periods; 1 credit)
This yearlong course in calculus covers the topics commonly taught in the first two semesters of calculus at the college level. Limits of functions are studied first using algebra, geometry, and the concept of continuity. Once the derivative is introduced, the relation between a function and its first two derivatives is examined from symbolical, numerical, and graphical viewpoints. Building on these relations, applications follow, including related rates problems and optimization problems. Limits of infinite sums occurring in the solution of the area problem lead to the definition of the Riemann (definite) integral. Properties of this integral together with the Mean Value Theorem proven earlier lead to clear proofs of the two Fundamental Theorems of Calculus. From this foundation students are introduced to the basic methods of symbolic integration. Later, numerical methods are examined as well as the use of tables of integrals and a computer algebra system. Next follow basic applications of integration to geometry, physical science, and probability. Differential equations are treated from the three viewpoints listed above, and then the course concludes with the development of power series up to Taylor's Theorem. Throughout the course students will encounter a number of challenging or non-routine problems designed to improve their problem-solving skills. Students intent on taking either of the Calculus AP exams will be in position to do so.

ELECTIVES IN MATHEMATICS

Introduction to Statistics (2 weekly periods; ¼ credit)
This course covers the topics typically included in a one-semester college course in introductory statistics. First, data distributions are studied through graphs (bar charts, histograms, time series), then described by numbers (measures of center and variation), and finally via mathematical modeling (the normal distribution). Next, students learn to study data relationships through scatterplots, correlation, and linear regression. After this view of the practice of statistics, attention is turned to its theoretical underpinnings in the theory of probability. Through the hierarchy of sample space, event, probability of an event, random variables on a sample space, and calculation of the means and variances of such random variables, students become acquainted with enough theory to understand sampling distributions for counts, proportions, and sample means. The course concludes with an introduction to estimating with confidence (confidence intervals) and tests of significance, including P-values. As time permits, design of experiments and sampling will be discussed. With most of the topics on the Statistics AP covered, dedicated students may consider taking it upon successful completion of this course.

Mathematics of Linear Programming (2 weekly periods; ¼ credit)
In brief, Linear Programming is the study of the optimization of a given linear function over a given polygon or, more generally, polyhedral domain. Problems of this type occur frequently in economics, as in seeking maximum profit or minimum cost; and in operations research, as in seeking an airline's optimal scheduling of personnel and equipment. In this course students will learn how to formulate and solve linear programming problems using the Simplex Method. Emphasis will be placed on relating the intuitive and geometric aspects of linear programming to the arithmetic and algebraic side of the process.

Topics in Mathematics (2 weekly periods; ¼ credit)
While the actual topics covered in this course may change

from time to time, the purpose of the course remains constant: to challenge and encourage the student to exploit his interest in mathematics. The main concern is that the students gain an understanding of the methodology of mathematics. To this end, the course provides an environment in which the student may sharpen the mechanical skills and concepts he is learning in his math courses. He will find the topics presented interesting and intriguing as well as challenging. Recent topics around which this elective has been organized include the theory of limits, game theory, higher dimensional geometry, computational aerodynamics, and the art of problem solving.

SCIENCE

The Science curriculum of the Upper School requires all Cistercian students to take a high-school level course in the three fundamental natural sciences: Biology (Form V), Chemistry (Form VI), and Physics (Form VII). In Form VIII students are required to take a second, college-level course in any of these disciplines. At each level laboratory work is combined with the teaching of scientific theory. The accelerated nature of the mathematics curriculum supports the School's science program. The Chemistry course of Form VI presupposes basic algebraic skills, while the Physics course taken in Form VII is based on the concepts and skills acquired in Algebra II. Advanced Physics taught in Form VIII uses the knowledge of advanced trigonometry, elementary function limits and differential calculus.

Biology I (Form V; 5 weekly periods; 1 unit)
The primary goal of this course is to present the basic concepts of modern biology and its major unifying ideas. Topics include biochemistry, cellular biology, genetics and heredity, molecular biology, evolution, classification of living organisms, microbiology, ecology, pollution, and botany. Laboratory work, both investigative and observational, forms an integral part of the course, as does ongoing reading in current biological literature.

Biology II (Form VIII; 6 weekly periods; 1 unit)
The second-year biology course provides a more detailed study of many of the topics and concepts learned in Biology I. We begin with an extensive study of biochemistry and molecular biology, focusing on gene structure and function in prokaryotes and eukaryotes. Following is a more detailed look at cell structure and function, cell division, and energy-producing reactions. Advanced Mendelian genetics, evolution, ecology, microbiology, and anatomy and physiology are other topics that are studied. The lab component of the course consists primarily of AP Biology labs, supplemented by other molecular labs.

Chemistry I (Form VI; 5 weekly periods; 1 unit)
This course builds on the introduction provided in the Fourth Form. Students learn more of the language of chemistry as they review and move deeper into the concepts that build the structure of our understanding of the world of matter. Topics studied in-depth include atomic theory, types and states of matter, structure of matter, chemical reactions, stoichiometry, solutions, and the flow of energy in the change of physical and chemical systems. The course also introduces the more advanced topics of equilibrium, kinetics, thermodynamics, and electrochemistry. Throughout the year, students consider the relationship of chemistry to the solution of environmental problems. In their laboratory work, students learn the use of standard chemical equipment and techniques as they implement a problem-solving approach to answering questions of an experimental nature. Here, too, they learn to consider the environmental implications of their work.

Chemistry II (Form VIII; 6 weekly periods; 1 unit)
The second year chemistry course begins with a review of fundamental concepts studied in Chemistry I. Students then undertake a more in-depth study of kinetics, equilibrium, thermodynamics and electrochemistry. The emphasis on lab work continues as students learn to use more advanced techniques and equipment to analyze correctly a variety of unknown samples from both a qualitative and quantitative standpoint. Throughout the course, the use of chemistry to understand and manage environmental problems is stressed.

Physics I (Form VII; 5 weekly periods; 1 unit)
This course acquaints students with concepts that form the foundation of physics and engineering. One semester is devoted to classical mechanics, including the study of motion and falling bodies, Newton's laws, vectors, conservation of energy and momentum, work, power, circular motion and simple harmonic motion. During the second semester, students study waves, including sound and light, electromagnetism and topics from modern physics such as fission, fusion and radioactivity. Laboratory experiments and projects are assigned to develop "hands-on" skills. Math is at the level of trigonometry. Understanding the underlying concepts and conservation laws is stressed throughout the course.

Physics II (Form VIII; 6 weekly periods; 1 unit)
Students who elect this science course will spend one semester each on the study of mechanics and electromagnetic theory. Calculus is used throughout. Students choose a long-range project to complete during their lab time. This course corresponds to the first two semesters of the four semester calculus-based sequence required of college physics and engineering majors.

ELECTIVES IN SCIENCE

Aerodynamics (2 weekly periods; ¼ credit)
The aerodynamics elective is designed to help students understand the basic principles of fluid dynamics and flight. Students build several airfoils for testing in the school's Low-Speed Wind Tunnel. They also construct gliders and rubberband-powered aircraft.

A.P. Physics (2 weekly periods; ¼ credit)
In this elective students study additional topics from physics, including fluids, the kinetic theory of gases, heat transfer, thermodynamics, and modern atomic theory.
Considerable time is devoted to familiarizing the students with A.P.-level problems and practice tests.

Astronomy (2 weekly periods; ¼ credit)
After a brief history of the oldest science, students learn about our own solar system, the sun and other stars, galaxies, and such bizarre objects in the universe as black holes. Several opportunities for telescope viewing and other field trips are an integral part of the course.

Comparative Vertebrate Anatomy (2 weekly periods; ¼ credit)
This course allows the students to learn and compare the detailed anatomy of three of the vertebrate classes of the phylum chordata. The students spend the majority of their time dissecting a dogfish shark (Chondrichthyes), a frog (Amphibia), and a rat (Mammalia). There is one lab practical for each dissection.

Engineering Projects (2 weekly periods; ¼ credit)
This is a hands-on course in which students learn about and build various projects. Topics selected in the past include balsa-wood bridges, hot air balloons, catapults, CO_2 dragsters, and a miniature motorized amusement park.

Field Studies (2 weekly periods; ¼ credit)
This course is designed to acquaint the student with the methods of biological field study of both plants and animals. It includes the study of the organisms in their environment as well as methods of collection, classification, live maintenance in the lab, and preservation. The organisms studied come mainly from the fauna and flora on and around the campus. Prerequisite: one semester of Biology.

Introductory and Advanced Computer (2 weekly periods; ¼ credit)
This course teaches students to use the computer as a problem-solving tool. In the Introductory Computer Class--the first course for Computer Science in the Upper School--topics such as lists and recursions are introduced using the programming language SCHEME (used for Introductory Programming classes in universities such as Rice and Georgia Tech). We then apply this knowledge to investigate the language PYTHON.
In Advanced Computer, students work with C++ to investigate topics relatd to the AP Computer course. Those who demonstrate proficiency in C++ are allowed to advance to JAVA programming. A grade of "C" or better in mathematics is required.

Robotics (2 weekly periods; ¼ credit)
This elective is a directed study of simple robotic systems. Students first investigate robotics using LEGO Robotics systems and a version of the programming language C. During the course, students learn basic transistor theory and how to solder and program microcontrollers. They are expected to design and build simple robots and/or build a robot, as a group, to enter in the Dallas Personal Robotics group competition.

FINE ARTS

The Fine Arts program in the Upper School consists of both regular coursework and extracurricular offerings. In Forms V and VI students continue their study of art history in their world civilization and cultures classes. They also study the history of music in its historical and social context. All students of the Upper School participate in the school's two-day arts festival. They visit local art exhibits, attend lectures and panel discussions by active artists, and participate in workshops. Through a series of electives in studio art, music, photography, and digital video students have the opportunity to develop their skills in making and appreciating art.

ELECTIVES IN FINE ARTS

Music Elective (2 weekly periods; ¼ credit)
During the first quarter of this elective, students learn to identify music of the various periods of music history by studying the characteristics of each. They also study the composers whose works have determined the course of "classical" music over the past few centuries. In the second quarter, the focus will change to a variety of topics to be determined by the interest of the class. Examples of these topics are classic rock, hip-hop, reggae, Celtic music, Gilbert & Sullivan, classic musicals and world music. Performance opportunities and self-paced work on music theory are also included, depending on the interest and abilities of the students.

Opera Appreciation (2 weekly periods; ¼ credit)
This elective introduces the student to the history, music, songs, and glory of this 400-year-old art form. While also learning the basics about the lives and works of operatic composers, students become familiar with what goes into the production of an opera (sets, lighting, orchestra) and how to listen to an opera (overture, arias, choral singing, vocal types) for the greatest personal pleasure. The viewing on videotape of such classics as Mozart's *Magic Flute*, Rossini's *The Barber of Seville*, and Puccini's *Madame Butterfly* will take up a good portion of the class. Students will also have an opportunity to attend the Dallas Opera performances and out-of-town productions in Ft. Worth, Austin, and Houston.

Photography I (2 weekly periods; ¼ credit)
This course is the first step in truly understanding not only the how to but the why of Black & White Photography. No prior knowledge of cameras or the photo process is required. The course begins with presentation of the essence of all photography: understanding the properties, characteristics and manipulation of light. Historical reference to the early pioneers of cameras and film is touched upon as well as the physical and chemical processes that take place during the exposure and

development of film. The concept of the proper exposure of the film, the understanding of the relationship between the camera controls (aperture, shutter speed and film speed) and proper use of the camera and lenses, lead to the hands-on making of photographic prints, with extensive instruction in film development and print enlarging in the school darkroom. Proper mounting and display techniques are also practiced. The semester culminates with a student show of mounted photographs showcasing the techniques and skills learned in Photography I. A 35mm adjustable manual camera is required.

Photography II (2 weekly periods; ¼ credit)
Photography II is a continuation of Photography I with primary emphasis placed on composition and previsualization of photographs, advanced techniques in black-and-white printing and preparation of prints for display. Individual projects on specific themes will be produced for a gallery type exhibition on a regular basis. Students should have successfully completed Photography I or have an equivalent working knowledge of 35mm camera operation (shutter speed, familiarity with black-and-white printing methods).

Photography III (2 weekly periods; ¼ credit)
Advanced Photography should be considered by the student who has successfully completed Photography I and Photography II, and desires to work in an independent study format. This course is tailored to the specific desires of the student with input and supervision from the instructor. The specific topics and projects will be student generated, but all will lead to the development of a student portfolio. This portfolio will be a body of work based on an individual theme or style chosen by the student. Advanced techniques in B/W printing, darkroom manipulation and museum presentation of the photographs are an integral part of this course. Successful completion of the course will result in a photographic portfolio of presentation quality, suitable for submission in college-level art or advanced photography studies.

Photography IV (2 weekly periods; ¼ credit)
This is a continuation of Photography III with emphasis placed upon student-generated independent study topics. These topics can include traditional or experimental themes, digital photography, or multimedia and mixed media photography projects. Students will produce a collected body of advanced photography work.

Studio Art: Acrylic (2 weekly periods; ¼ credit)
This class introduces students to the acrylic painting method. Instruction covers color theory, color mixing, wash and impasto techniques, compositional development, and critique. Students are expected to complete 6-8 canvases.

Studio Art: Drawing (2 weekly periods; ¼ credit)
Drawing is the first step in learning to communicate through the visual arts. Various materials and techniques are explored, including pencil, charcoal, pen and ink. Students are required to prepare drawings for competition and exhibition.

Studio Art: Encaustic Painting (2 weekly periods; ¼ credit)
This course introduces students to the ancient encaustic method of painting using beeswax and damar crystal as a binder for color pigments. Students are instructed in the production of encaustic paint as well as the proper use of modern encaustic equipment.

Studio Art: Printmaking (2 weekly periods; ¼ credit)
This class investigates several techniques of printmaking, including linoleum block, wood block, plexiglass drypoint etching, monotype and monoprint, and foam cut. Color techniques will be included along with the regular black and white process.

Studio Art: Projects (2 weekly periods; ¼ credit)
This course will explore a wide variety of art media and projects including oil painting, installation art, performance art, and printmaking.

Video I (2 weekly periods; ¼ credit)
A hands-on course in the fundamentals of producing a professional quality video using the school's digital equipment in the mini DV format. Topics include script writing, storyboarding, translation of the story from script to visual scenes, and directing actors. Post-production techniques include non-linear editing using Adobe Premiere software in the school's digital video lab, transitions, titling and audio. Prerequisites: Form VII-VIII students, previous Photography I & II courses or permission of the instructor. Some computer experience is helpful.

Video II (2 weekly periods; ¼ credit)
This is a continuation of Video I course with emphasis on camera use and advanced editing techniques in Adobe Premiere. Each student will write, direct, film and edit his own short video film using the school's digital video lab facilities and digital video cameras.

UPPER SCHOOL ATHLETICS

Physical Education and Athletics form an important and necessary part of the school curriculum. Each student is encouraged to perform on the level of his own capability within the framework of teams and in the pursuit of a common goal. In this manner, boys come to understand teamwork and sportsmanship. Each student is required to pursue an interscholastic sport or attend the regular physical education classes. The school year is divided into three seasons with the following sports offered in each season: Fall--Football/Cross Country; Winter--Basketball/Soccer/Swimming; Spring--Track/Tennis/Baseball. The Upper School competes in the Southwest Preparatory Conference (SPC).

Notes