Academic Curriculum 2015-2016

> CHRIST SCHOOL IS A COLLEGE PREPARATORY SCHOOL. At the start and heart of our mission is our charge to prepare our students for success and achievement in college and life beyond academia. Our curriculum is driven, in large measure, by the relevant knowledge and skills students will need in college and the global 21st century workplace.

> CLASSES ARE SMALL BUT DEMANDING and are built around critical thinking, thorough research, incisive analysis, and strong writing. Memorization is not a goal. We expect all students to become independent learners, to expand their intellectual curiosity, and to demonstrate improvement and mastery in the difficult material with which they are challenged.

> ALL STUDENTS ARE ENCOURAGED TO CHALLENGE themselves by taking demanding classes which push them intellectually. We offer twenty-seven honor level courses and fifteen Advanced Placement courses, in all departments. A number of students each year earn college credit for their performances on their Advanced Placement exams.

> THE CURRICULUM CENTERS ON THOROUGH PREPARATION in the areas of English, History, World Languages, Math, Science, Religion, Technology, and Arts. Each student, working closely with his advisor and the Academic Office, picks a course of study which will challenge him and which is consistent with his intellectual development, previous course work, and his interests.

> OUR EIGHTH-GRADE CURRICULUM is built on the concept of "discovery." Students follow a core of interdisciplinary programs in English, social studies, math, science, art, and experiential learning outside of the classroom that will challenge their leadership skills. There are opportunities to coordinate community service and academic classes with other area schools. Qualified eighth grade students may attend high school level classes and receive graduation credit for successful completion of courses in math, science, and World Languages.

> WHILE MUCH OF OUR STUDENTS' ACADEMIC SUCCESS can be attributed to very bright teachers who understand boys and know how to communicate, inspire and excite them, students are given a variety of additional resources and support to foster success. While structure and consistency are foundations, extra help sessions in the mornings or afternoons, access to teachers and tutors at night, study halls, learning specialists, and remarkably small classes contribute to our young men finding more success than they thought possible.

> STUDENTS ALSO TAKE THE ACT, PLAN, PSAT, SAT I and II, and/or Advanced Placement Exams.

Graduation requirements consist of 20 credits with specific unit requirements in certain content areas.

English	4 units	Required each year
Science	3 units	Credits are required in Biology, Chemistry, and a third lab science. A fourth year of science is strongly recommended.
Mathematics	4 units	Credits are required in Algebra I, Geometry and Algebra II additional math.
World Languages	2-3 units	2 credits are required in the same language.
History	3 units	Requirements include 1 credit of US History. Two other **c**redits in a history or social studies course, or an elective, are required.
Fine Arts	1 unit	.5 credit of your fine arts requirement must be in music.
Religious Studies	.5 unit	One semester is required
Electives	2.5-3.5 units	

Grading Scale		College Prep	Honors Weighting	AP Weighting
98-100	A+	4.33	4.87	5.41
93-97	A	4.00	4.50	5.00
90-92	A-	3.67	4.13	4.58
88-89	B+	3.33	3.74	4.16
83-87	B	3.00	3.37	3.75
80-82	B-	2.67	3.00	3.33
78-79	C+	2.33	2.62	2.91
73-77	C	2.00	2.25	2.50
70-72	C-	1.67	1.88	2.08
68-69	D+	1.33	1.50	1.66
63-67	D	1.00	1.12	1.25
60-62	D-	0.67	0.75	0.83
Below 60	F	0.00	0.00	0.00

NOTE: Grade Point Averages will be calculated on Christ School course work only. Courses and credits earned at other institutions will be shown on the transcript but will not be included in the Christ School GPA.

Sample Course of Study

The majority of our courses are offered at an Honors level and we also offer 17 different AP courses.

Grade 8

English 8	0.0	Credits
Math (Pre-Algebra or Algebra I)	1.0/0.0	Credits
Humanities 8	0.0	Credits
Integrated Science	0.0	Credits
World Languages I/Intro to World Languages or Fine Arts 8	1.0/0.0	Credits
	2.0-0.0	

Grade 9

Intro to Genres	1.0	Credits
Algebra I/Geometry	1.0	Credits
Biology	1.0	Credits
Empires & Encounters	1.0	Credits
World Languages I - II	1.0	Credits
Fine Arts (Art or Music)	.5	Credits
	5.5	

Grade 10

World Literature	1.0	Credits
Geometry/ Algebra II	1.0	Credits
Chemistry	1.0	Credits
20th Century World History	1.0	Credits
World Languages I, II, III	1.0	Credits
	5.0	

Grade 11

American Literature or AP English Literature	1.0	Credits
Algebra II, Statistics, Advanced Functions & Modeling, or Pre-Calculus	1.0	Credits
Environmental Science, Physics or Science Elective	1.0	Credits
U.S. History or AP U.S. History	1.0	Credits
World Languages II - IV	1.0	Credits
Religion	.5	Credits
	5.5	

Grade 12

British Literature or AP English Language	1.0	Credits
Pre-Calculus, Statistics, AP Calculus or AP Computer Science	1.0	Credits
Environmental Science or Physics	1.0	Credits
History Elective	.5	Credits
Fine Arts (Art or Music)	.5	Credits
Electives	1.0	Credits
	5.0	

Sample of Elective Course Offerings

(Not all electives are offered each year)

Term Courses

American Writers
Architecture of Leadership
Choir
Creative Writing
Ecology of Southern Appalachia
Ethics & International Affairs
Geology of Southern Appalachia
Journalism/Digital Media
Journalism/Newspaper
Journalism/Yearbook
Middle East
Music Appreciation
Music Technology
Music Theory I & II
Music Practicum
New Testament
Old Testament
Psychology
Public Speaking, Rhetoric & Debate
Test Prep
Studio Art I, II, III, IV
World Religions
Writing Essentials I & II

Year Courses

Advanced Functions & Modeling
AP Art History
AP Biology
AP Calculus AB & BC
AP Chemistry
AP Computer Science
AP English Language
AP English Literature
AP Environmental Science
AP World History
AP Latin
AP Music Theory
AP Physics I, II & C
AP Spanish Language
AP Statistics
AP U.S. History
AP U.S. Government & Politics
Arabic I & II
Calculus
Environmental Science
Film as Literature
Honors 20th Century World History
Honors Algebra I and II
Honors American Literature
Honors Arabic III & IV
Honors Biology
Honors British Literature
Honors Chemistry
Honors Choir
Honors Empires & Encounters
Honors Geometry
Honors Intro to Genres
Honors Latin I, II, III and IV
Honors Pre-Calculus
Honors Spanish I, II, III, and IV
Honors U.S. History
Spanish Language Culture & Conversation
Statistics

COURSE DESCRIPTIONS

ENGLISH

English 8

This course serves as an introduction to genre: short stories, plays, poems, essays and novels. Literature is studied through an integration of English and history at the eighth grade level, offering the students a survey of literature which emphasizes the themes of journey and discovery. The study of written expression offers practice in writing clear sentences and organized, coherent paragraphs. The grammar component stresses mastery of the parts of speech and the parts of a sentence. Vocabulary is enhanced through an SAT based program. *(Students do not receive High School credit for this course) 8th grade*

Intro to Genres

This ninth grade survey course introduces students to reading and writing practices on which they will build during their high school careers at Christ School. Students read, discuss and write about a variety of literary forms: novels, short stories, poetry, drama and nonfiction. Students' study of grammar and composition emphasizes competency in mechanics, usage, paragraph writing and vocabulary development, as well as the fundamentals of five paragraph thematic essays. Reading comprehension skills for standardized tests are introduced. *9th grade*

Honors Intro to Genres

This ninth grade survey course introduces students to reading and writing practices on which they will build during their high school careers at Christ School. Students read, discuss and write about a variety of literary forms: novels, short stories, poetry, drama, and nonfiction. They learn to analyze literature for its content and author's purpose, and convey their findings through oral presentations and the written word. Students' study of grammar and composition emphasizes competency in mechanics, usage, paragraph writing and vocabulary development, as well as the fundamentals of five paragraph, thematic essays. Reading comprehension skills for standardized tests are introduced. *9th grade*

World Literature

This course introduces the students to the "Coming of Age" theme through selections of world literature relevant to the lives of adolescent students. Students are taught important elements of literary criticism, including character development, style, setting, mood, point of view, and theme. Regular practice in writing leads to mastery of the five-paragraph essay and strength in expository writing. A systematic study of vocabulary in the form of reading comprehension and sentence completion skills complete this course. *10th grade*

Honors World Literature

In addition to the skills and themes explored in the World Literature course, Honors World Literature challenges the student to think critically every day, not only about literature but also about their own philosophies and values. This critical thought is fostered through lively class discussion and fast paced production of expository and analytical writing. *10th grade*

American Literature

This course is a survey of American literature from its early stages through the twentieth century. Emphasis is placed on close reading, stressing comprehension, analysis, and insight. Students explore the American Dream's relevance to a collective cultural identity, as well as to an individual identity. Students also engage in a rigorous regimen of analytical and expository essay writing. Mechanics and proper word usage are emphasized as the student completes a challenging study of college level vocabulary. Skills in research for a required research paper are developed. *11th grade*

Honors American Literature

The aim of this course is to challenge students with a rigorous study of pieces of American literature, their profound impacts on their respective historical contexts, and their enduring impacts on our contemporary roles as citizens and individuals. Design of the course mirrors American Literature with greater expectations of discourse, research, and written analysis. *11th grade*

British Literature

The objectives of this course are to expose students to influential authors and significant ideas in British Literature. There is an emphasis on close reading, interpretation, criticism, analysis, synthesis, and application. A literary research paper is required, which emphasizes the use of secondary sources, proper MLA formatting, and encourages imagination and creativity in writing. A working vocabulary is fostered within the context of assigned readings and compositions. *12th grade*

Honors British Literature

The objectives of this course are to expose students to influential authors and significant ideas in British Literature. There is an emphasis on close reading, interpretation, criticism, analysis, synthesis, and application. A literary research paper is required, which emphasizes the use of secondary sources, proper MLA formatting, and encourages imagination and creativity in writing. A working vocabulary is fostered within the context of assigned readings and compositions. The "Honors" section for the Survey of British Literature includes a "faster" syllabus; more reading; higher expectations for analysis, writing, and application; and more independent work. *12th grade*

AP English Literature and Composition, AP Language and Composition

These Advanced Placement classes may be taken during the student's junior and/or senior year. Concentration is placed on reading and writing skills necessary for successful completion of the College Board's AP exam. Preparation is rigorous with the goal of developing intellectual curiosity and independence.
Prerequisites: Grade of A- or better in previous English class (B+ in honors) and at least a 50 Critical Reading or Writing score on the PSAT (500 SAT); serious interest in the subject and willingness to take on the additional challenges of an entry-level college course; approval of department chair.

Film as Literature

In this two semester course, students explore the connections between film and literature. We will *read* short stories, novels, and newspaper articles and then *watch* the films based on those writings. Just as an English class teaches a student to write with clarity, this course includes technical instruction in video production in order to provide the student with basic skills needed to express meaning visually. The first semester will focus on literature, film and analysis with a variety of small video production assignments. The second semester continues the study of literature and film but moves toward a final quarter focused on production of an original, all-class video. Films and readings include *On the Waterfront, Slaughterhouse Five, To Kill a Mockingbird, Stagecoach, Birdman, The Truman Show,* and *Rear Window.* This course fulfills an English and an Art credit. *The course is designed to be a two semester course. However, students may take the first semester only if need be. The second semester requires having taken the first semester.*

Sci-Fi and Fantasy

In this semester long course, students will experience major works of fiction in the genres of Science Fiction and Fantasy. We will study short stories, novels, graphic novels, radio broadcasts, television shows, and films. The emphasis on the course will be thorough reading and thoughtful discussion. Some classes will be dedicated to screen and radio adaptations of texts. Students will contribute weekly to a discussion board as well as write short papers. Students will gain an understanding and, hopefully, an appreciation of these genres which will lead them to further studies. Some of the works studied include: *The Hobbit, Star Wars, Blade Runner, and Watchmen.*

War in Literature

For millennia, writers have told tales of war. Some have drawn from personal experience, others from their imaginations, but all wrestle with the ineluctable truth that civility, cooperation, and tolerance – the threads that knit us into a human family – snap far too easily when strained by jealousy, prejudice, greed, or religious extremism. In these war stories, some men behave very, very badly, surrendering to fear and the reflex to destroy, while others define heroism with their astonishing courage and self-sacrifice. In this course, we will read a variety of texts that tell these stories of war. Starting on the blood-soaked flatlands outside the gates of ancient Troy and ending in the mortar-strafed ruins of yesterday's Kabul, we'll test our understanding of war and the warriors who stride or creep across the pages of classic and contemporary texts. What will we read? Novels, short stories, and personal narratives by authors like Homer *(Iliad),* Ernest Hemingway *(A Farewell to Arms),* Joseph Heller *(Catch-22),* Kurt Vonnegut *(Slaughterhouse Five),* Tim O'Brien *(The Things They Carried),* Dexter Filkins *(The Forever War),* and Sebastian Junger *(Restrepo).*

MATHEMATICS

Pre-Algebra

Pre-Algebra is taught as a preparatory course for Algebra I. It begins with an extensive review of the basic operations with fractions and decimals. Topics then travel through GCF, LCM, integer operations, signed numbers, equations, inequalities, basic geometric information, exponents, fractional expressions, ratio, proportion, percents, rational and irrational numbers, area, volume, polynomials and quadratics. Problem solving skills are introduced. *(Students do not receive High School credit for this course)*

Algebra I

Algebra I begins with a review of operations involving signed numbers. Topics introduced in Pre-Algebra are covered in more depth. Discussions and exercises include equations, inequalities, linear equations, functions, polynomial work, factoring, fractional expressions, systems, exponents, rational and irrational numbers, and quadratics. Problem solving and critical thinking skills are emphasized.

Algebra II

Algebra II is the stepping stone to higher mathematics and sciences. Problems investigated require stronger and more complex thinking. Linking of concepts are investigated and exercised. Areas discussed include functions, polynomials, rational and irrational expressions and equations, systems, imaginary and complex numbers. Situational and word problems promote higher degrees of problem solving skills. Consequently, calculators are an essential part of Algebra II. This course usually follows Geometry in the Christ School Math Department sequence.

Geometry

Geometry is a comprehensive course of study in which logical reasoning and spatial visualization skills are developed through a variety of teaching and learning methods. The goal is to have students understand plane and solid geometry and become capable of performing formal geometrical proofs. Topics covered include basic geometric definitions, parallel lines and planes, congruent and similar polygons, circles, area, volume, coordinate geometry, and proofs. This course usually follows Algebra I in the Christ School Math Department curriculum.

Honors Math

Honors courses in Algebra I, Algebra II, and Geometry are designed to prepare a student for the AP Calculus AB and BC courses. These three honors math courses move at an accelerated rate challenging the able and motivated student.

Statistics

This is a survey that will give a student a very broad background of how data is collected and then used to make predictions or observations. Students travel through Mean, Median, and Mode problems through Causation and Probability through to tests of accepting or rejecting. Statistics is an alternative course to Pre-calculus and Finite. Using TI-83 calculators is a must.

Advanced Functions and Modeling

Advanced Functions and Modeling provides students an in-depth study of modeling and applying functions. Home, work, recreation, consumer issues, public policy, and scientific investigations are just a few of the areas from which applications should originate. *(Prerequisites: Algebra II and Geometry)*After taking the course, the student will be able to:

1. Describe graphically, algebraically and verbally phenomena as functions; identify independent and dependent quantities, domain, and range, and input/output.
2. Translate among graphic, algebraic, numeric, and verbal representations of relations.
3. Define and use linear, quadratic, cubic, and exponential to model and solve problems.
4. Use systems of two or more equations or inequalities to solve problems.
5. Use the trigonometric ratios to model and solve problems.
6. Use logic and deductive reasoning to draw conclusions and solve problems.

Pre-Calculus and Honors Pre-Calculus

Pre-calculus reviews and extends concepts from Algebra and Geometry. It integrates them through intensive graphical analysis. Trigonometric topics are covered in depth with applications as the primary focus. Other areas studied include conic sections, sequence and series, statistics and limits. Functional notation is emphasized throughout the course. The honors level of this course is fundamental preparation for studying Calculus.

Calculus

This class is offered to those students who wish to learn Calculus but are not prepared for the Advanced Placement exam in the subject. Students learn to differentiate and to integrate various elementary functions, to evaluate limits, and to apply those skills in solving a variety of mathematical problems.

AP Calculus: AB and BC

This Calculus class covers the material intended for a typical two-semester college freshman course. The approach used encourages visualization, and every effort is made to integrate current technology into the mainstream of the course. The emphasis is on presenting the calculus as a tool for the student in his later academic and professional life. Two calculus courses prepare students for the College Board's AP Calculus AB level or BC level exam. *Prerequisite: Approval of instructor based on recommendation of previous year's math instructor.*

AP Statistics

The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

- Exploring Data: Describing patterns and departures from patterns
- Sampling and Experimentation: Planning and conducting a study
- Anticipating Patterns: Exploring random phenomena using probability and simulation
- Statistical Inference: Estimating population parameters and testing hypotheses

AP Computer Science

This full-year course is designed to prepare students for taking the AP Computer Programming exam; emphasis focuses on C++ and Java Script language, syntax and rules. Course projects include creating programs to understand all aspects of programming for Windows based programs. *Prerequisite: Approval of instructor based on recommendation of previous year's math instructor.*

Linear Algebra

Linear Algebra is a requirement for mathematics and physics majors, and it's highly recommended for majors in other sciences especially including computer-science majors. Topics include systems of linear equations and their solutions, matrices and matrix algebra, inverse matrices; determinants and permutations; real n-dimensional vector spaces, abstract vector spaces and their axioms, linear transformations; inner products (dot products), orthogonality, cross products, and their geometric applications; subspaces, linear independence, bases for vector spaces, dimension, matrix rank; eigenvectors, eigenvalues, matrix diagonalization. Some applications of linear algebra will be discussed, such as computer graphics, Kirchoff's laws, linear regression (least squares), Fourier series, or differential equations. . *Prerequisite: AP Calculus BC and Instructor recommendation*

Differential Equations

The construction of mathematical models to address real-world problems has been one of the most important aspects of each of the branches of science. It is often the case that these mathematical models are formulated in terms of equations involving functions as well as their derivatives. Such equations are called differential equations. If only one independent variable is involved, often time, the equations are called ordinary differential equations. The course will demonstrate the usefulness of ordinary differential equations for modeling physical and other phenomena. Complementary mathematical approaches for their solution will be presented, including analytical methods, graphical analysis and numerical techniques. Pre-Req: Instructor rec. and Linear Algebra. *Prerequisite: Linear Algebra and Instructor recommendation.*

SCIENCE

Integrated Sciences

This is a one year course offered to eighth grade students only. It is designed to expose students to physical, life, and earth science while deepening their curiosity for science and strengthening their basic scientific process skills. Through hands-on activities, labs, field trips, and research, students will explore local and global weather, environmental science, human biology, botany, entomology, and ornithology throughout the year. *(Students do not receive High School credit for this course)*

Biology

Biology is a laboratory oriented course and uses a hands-on approach to learning about biological processes. It emphasizes the interrelationships between "abiotic" and "biotic" parameters that organisms must regulate. Specifically, cell structure and function, the chemical nature of organisms, biochemistry, genetics, behavior, ecological relationships, plant and animal structures, and energy mechanisms in organisms are highlighted. *Usually taken in 9th or 10th grade.*

Honors Biology

The Honors Biology course is an intensive year long introduction to the principles and patterns that govern life. Students participate in weekly laboratory activities and daily class preparation including independent reading and note-taking. The class progresses swiftly and covers the major topics of molecular and cellular biology, evolution, and anatomy and physiology. Students are required to conduct an independent research exercise in the second term. *The course is open to 9th and 10th graders.*

Chemistry

This course emphasizes underlying and unifying concepts upon which chemistry is based. The major topics are atomic theory, chemical nomenclature, balancing equations, precipitation reactions, acid-base reactions, redox reactions, and practical (applied) chemistry. Laboratory investigations emphasize a hands-on approach with write-ups being an integral part of the course work. Developing analytical thought processes and independent study is strongly encouraged. *Prerequisite: Biology.*

Honors Chemistry

This course is designed to present to the introductory chemistry student essential topics concerning the actions and interactions of matter—both ionically and molecularly. Special emphasis is placed on chemical nomenclature, balancing equations, precipitation reactions, acid-base reactions, redox reactions, and on the practical application of chemistry. *Prerequisites: Honors Biology or Teacher approval.*

AP Biology

Advanced Placement Biology is presented using a molecular approach and follows the College Board's AP course outline in preparation for the AP exam. Initial considerations of cell processes are based upon mastering an understanding of their biochemical relationships. In addition, genetics, photosynthesis, cell respiration, protein synthesis, cell structure, enzyme-substrate reactions, plant and animal physiology, and nucleic acids are studied in depth. Extensive laboratory investigations are used to further students' understandings of the principles studied. *Prerequisites: B or higher in Honors Biology and Honors Chemistry (or an A in the regular course) plus teacher approval.*

AP Chemistry

AP Chemistry is an advanced level chemistry class that will primarily cover topics that are presented on the AP exam. Students will be required to perform multiple techniques in laboratory sessions, debate and discuss current theories in chemistry, create an independent research project and take the AP exam at the end of the year. *Prerequisites: B+ or higher in Honors Biology and Honors Chemistry (or an A in the regular course) plus teacher approval.*

AP Environmental Science

AP Environmental Science integrates other scientific disciplines into a year-long study of the Christ School campus. Students prepare for the AP exam while collecting data on water, soil, biological diversity, waste, energy, land use, and human populations. Interpretation of the data and applying them to a global scale are essential parts of this rigorous college-level course. *Science teacher approval.*

AP Physics I Algebra-Based

This course is the equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits. This course has a strong laboratory component and emphasizes student problem solving strategies.

*Note to advisors: This course is designed for students interested in studying something outside of science or engineering in college. Algebra, geometry, and trigonometry principles are used to support the exploration of basic Newtonian Physics concepts. However the emphasis of this course is developing a strong conceptual understanding of the subject. Laboratory investigations will involve basic uncertainty and error analysis.

AP Physics II Algebra-Based

This course is the equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; and atomic and nuclear physics.

*Note to advisors: This course is designed for students interested in studying something outside of science or engineering in college. Algebra, geometry, and trigonometry principles are used to support the exploration of basic Physics concepts. However the emphasis of this course is developing a strong conceptual understanding of the subject. Laboratory investigations will involve detailed uncertainty and error analysis.

AP Physics C Mechanics

The course follows the College Board syllabus for AP physics C Mechanics and is equivalent to one semester of university calculus based physics. The course covers Newtonian mechanics, has a strong laboratory component, and emphasizes student problem solving strategies. *Co-Requisite: Pre-Calculus, Calculus, AP Calculus, And Pre-Requisite: A in Honors Algebra II*

Note to advisors: This course is designed for students interested in studying science or engineering in college. The emphasis of this course is on using calculus and mathematical principles to comprehensively explain Newtonian Physics concepts. Students will need to be exceptional at problem solving to be successful in this course. Laboratory investigations will involve detailed uncertainty and error analysis.

Anatomy/Kinesiology

This elective class is offered for those students interested in learning anatomy and physiology with an emphasis towards sports. Specific topics would include: bones, muscles, tendons, ligaments, common injuries, and best practices for improving athletic performance through exercise, nutrition and recovery. *Prerequisite: Biology and Chemistry.*

Biochemistry

This course serves to be an advanced topic course for students who have completed chemistry and biology. The course will aim to provide a connection between topics covered in introductory biology and chemistry courses. The course will also seek to advance the students' knowledge of cellular biology concepts, most notably cellular respiration and replication cycles, as well as knowledge of organic functionality and synthesis. Through lab activities and discussions, the course will provide students with concrete applications of material covered. *Prerequisite: Biology and Chemistry.*

Biotechnology

Students will explore the fundamental principles of biotechnology, career pathways and biotechnology business applications (medical, pharmaceutical, and agricultural). Topics of study include: plant tissue culturing; DNA, RNA, and protein technologies; genetic diagnostics; healthcare and pharmaceuticals; food processing (GMO's); fermentation technology; energy and environmental management; forensic science; cloning; stem cells; and bioethics. Laboratory activities reinforce concepts and principles presented. Self-sufficiency and responsibility in work habits required. *Prerequisite: Biology and Chemistry*

Ecology of Southern Appalachia

This course will explore the flora and fauna of southern Appalachia and discuss the unique relationships that define this bioregion. Students will have the opportunity to participate in several field studies and fieldtrips during this course. *Prerequisite: Biology and Chemistry*

Engineering Design

Students learn and use a professional design process and the latest version of an industry standard computer aided design (CAD) program, Autodesk Inventor, to design solutions to problems of their choice. A 3D printer will produce their design in durable ABS plastic. The design process will be documented in a professional portfolio suitable for higher education and employment applications. *Prerequisite or Co-requisite: Algebra I, Biology and Chemistry.*

Geology of the Southern Appalachian

This course will explore the unique geology of southern Appalachia as students learn about the formation of North Carolina. Students will have the opportunity to participate in several field studies and fieldtrips during this course. *Prerequisite: Biology and Chemistry*

Principles of Engineering:

POE helps students understand the fields of engineering and engineering technology with Mechanical Engineering being emphasized throughout. Exploring various technology systems and manufacturing processes, students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change. Topics covered include: definition and types of engineering, communication and documentation, design process, engineering systems, statics and strength of materials, materials and materials testing in engineering, engineering for reliability and an introduction to dynamics and kinematics. *Prerequisite or Co-requisite: Algebra II, Biology and Chemistry.*

Research Topics in Sports Physics

This course examines the physics behind a wide variety of sports, including baseball, football, hockey, soccer, track, and swimming just to name a few. Students will explore how science concepts such as force, momentum and energy give us a deeper understanding of the sports we play and watch. Mathematical and analytical approaches will be used to analyze video footage and real life demonstrations. Students will conduct research and carry out in-depth investigations on a topic of their choice and present their research to the class. *Prerequisite: Biology and Chemistry.*

HISTORY

Humanities 8

This course is one facet of Christ School's Eighth Grade Experience that is taught in conjunction with English 8 and Integrated Science emphasizing the theme of discovery. Humanities 8 draws from the subjects of history, psychology, religion, literature, health, and fine arts to provide students with an interdisciplinary curriculum of "Men's Studies" centered around the program's eight themes: Preparing for the Journey, Explorers and Discoveries, Our World Today, Building Healthy Relationships, Personal Wellness, Personal Spirituality, Developing Leadership, and Becoming a Gentleman. While the course's content focuses on the experience of entering manhood, it also emphasizes development of academic, social, and problem solving skills necessary for success in high school as well as in life. *(Students do not receive High School credit for this course)*

Empires & Encounters

Strongly recommended for all 9th grade students, this course begins with the histories of ancient Egypt, Israel, and Mesopotamia, and is followed by the Classical civilizations of Greece and Rome before culminating in a study of the Middle Ages. The course is designed to give students an awareness of their Classical and Judeo-Christian heritage and to inculcate a historical sense in which they come to appreciate opposing forces and clashing motives in societies.

Honors Empires & Encounters

All history is made up of evidence and interpretation. The evidence is in the form of recorded events, letters, newspapers, court records and so on. From this evidence a story is formed, but it is necessarily biased. In this course the student will be the historian and create his own story of ancient and medieval history using primary and secondary source materials. Class discussions, writing and research will broaden the perspectives on this period.

20th Century World History

This required class covers European history from 1453 to the present. It begins with analysis of the late Renaissance and Reformation, the emergence and importance of the nation-state, the Enlightenment, and the twilight of the Ancient Regime. The second semester focuses on the French Revolution and Napoleon, the nationalistic unification movements of the mid19th-century, and the World Wars of the 20th century with their present-day ramifications.

Honors 20th Century World History

This class, a comprehensive study of the key developments of the 20th Century, will focus on the major events that define the contemporary world and modern culture. Incorporating European, American and World history, the class will build upon themes from Global Studies I using a chronological format. Doing research and analyzing primary sources, students will probe into the defining political, social, economic and military trends of the recent past

United States History

This required class surveys the major events in United States History from the Age of Discovery through Watergate. The course involves students in readings and discussion topics through political, economic, social, and diplomatic approaches to learning history. A thorough review of the mechanics of our governmental system of federal democracy is included. A research paper is required with full and complete use of primary as well as secondary source materials.

Honors United States History

This course uses a college-level text to explore American history in detail from 1400 A.D. to the present. It is designed for students who have high motivation and a strong interest in history, self-discipline, and a high level of reading ability. The topics covered represent a chronological survey of the major political, economic, and social themes throughout America's development. Essay writing, cumulative mastery of factual material and critical thinking skills are stressed.

AP Art History

This course is a college-level survey of the history of art from prehistoric times through the 20th century. About half of the course will concentrate on art of western European culture, and the other half will be material concerning Ancient periods and non-European traditions (Asian, Islamic, African, pre-Columbian American, and Oceanic). The course will develop primarily chronologically, and will include discussion of political, economic, religious, social, philosophic, and military events; as these influence and are influenced by art.

AP US Government and Politics

This course integrates history and current events to acquaint students with the systems and structures of the United States government. The course focuses on the historical foundations of US democracy, the Constitution, the three branches of government, civil liberties and rights, as well as the role of media, political parties and interests groups in today's electoral system. This course is designed to prepare students for the Advanced Placement examination to be given in May. Furthermore, the course gives students a greater appreciation of the system of government under which they live and the roles of US citizens.

Prerequisites: Grade of A- or better in previous history class (B+ in honors) and at least a 50 Critical Reading or Writing score on the PSAT (500 SAT); serious interest in the subject and willingness to take on the additional challenges of an entry-level college course; approval of department chair.

AP U.S. History

This course, offered in both the 11th and 12th grades, examines the development of the history of the United States from colonial times through the present in preparation for the College Board's AP exam. Political, cultural, economic, diplomatic, and social factors related to American history are covered. The course includes training students to think analytically about major historical themes, and exposing students to a variety of interpretations of critical events. Extensive use of primary source documents is integral to the course, as is considerable writing.

Prerequisites: Grade of A- or better in previous history class (B+ in honors) and at least a 50 Critical Reading or Writing score on the PSAT (500 SAT); serious interest in the subject and willingness to take on the additional challenges of an entry-level college course; approval of department chair.

AP World History

The AP World History is a survey of the global past from 8000 BCE to the present. The curriculum is laid out by the College Board's Advanced Placement program to prepare students for the AP Exam in the spring. The course is structured around five themes, four historical thinking skills, and 19 key concepts over 6 chronological periods. Along with exploring 10,000 years of world history, the course will emphasize utilizing historical sources to craft arguments about the past, historical causation, continuity and change, comparative history, as well as analyzing, synthesizing, and interpreting the past. These skills will prepare students for success on the multiple choice, essays, and document-based question on the AP Exam. *(11th & 12th Grade)*

African American History

This is a one semester elective designed to explore the unique history and culture of Black America and its African roots. The course will examine the struggles and triumphs of Black Americans from the slave trade to the present day. The class will emphasize the Black leadership, social movements, philosophies, and approaches to attaining civil rights, as well as the distinct contributions Blacks have made to US culture in the fields of music, visual arts, literature, and sports. Significant readings will be required, as will regular analyses of these texts through formal papers and class discussions.

Introduction to Entrepreneurship

The purpose of this course is to introduce students to the basic ideas in starting and running a successful business. Students will learn how to create a successful business plan, a marketing strategy, and the importance of leadership in managing all aspects of the business successfully. Each student will create their own business during the semester, and as a class we will learn from each student's experience. *(11th & 12th Grade)*

Microeconomics

Introductory Economics is an elective course designed to introduce the fundamental concepts of Economics to 11th and 12th Graders who are interested in learning about various economic systems and their underlying principles. We will study the topic of microeconomics, which examines individual economic issues such as the Law of Diminishing Returns, Supply and Demand, and Government Regulation.

Middle East

This is a one semester team-taught course designed to give students a better understanding of the history, geography, economics, cultures, and peoples of the eastern Mediterranean area known as the "Middle East." The course surveys the three major religions of the region (Judaism, Christianity, and Islam) and their significance in culture and politics. Particular focus is given to Islam and its impact, both historic and contemporary, on the Middle East region and the world. Significant readings will be required, as will regular discussions of the readings and of current events from the region. *(11th & 12th Grade)*

Macroeconomics

Introductory Economics is an elective course designed to introduce the fundamental concepts of Economics to11th and 12th Graders who are interested in learning about various economic systems and their underlying principles. We will study the topic of macroeconomics, which examines aggregate economic issues, such as Gross Domestic Product, Inflation and Employment.

Psychology

The purpose of this course is to introduce students to the basic principals and theorists in psychology, as well as address certain adolescent issues and personal development. The class will be familiarized with major concepts and theories, helped to understand key terms, and compare and contrast major theories. In addition, we will apply valid information about mental and physical health in the time of adolescence so students can make decisions consistent with their value system. At the conclusion of the semester, students should have a general knowledge of the history, concepts, and theorists in the field of psychology, and more importantly, should have a better understanding of themselves and the decisions that they make. *(11th & 12th Grade)*

Public Speaking, Rhetoric & Debate

This course will demonstrate the tradition, importance and power of public speaking and its many applications in today's world. We will examine great speeches in history, study the link between public speaking and critical thinking and focus on the importance of the ethical responsibility involved in the dissemination of information. Students will increase their fluency as speakers, and develop their self-confidence. The course also introduces oral interpretation of literature, and beginning argumentation and gives the student practical experience through participation. Students will begin by analyzing the rhetorical context of their discourse by asking themselves the following: Why are you speaking or writing? To whom? How will your message be delivered or received? What is your message about? Finally we will address confidence and nervousness, preparedness, delivery and public speaking in a multicultural world. *(11th & 12th Grade)*

RELIGION

Introduction to New Testament

This introductory course satisfies the Religion requirement for graduation. Students of any Form are eligible, but it is most appropriate for Forms IV-VI (grades 10-12).The course is intended to provide a one semester overview of the New Testament, building on themes of the Old Testament. Like its Introduction to the Old Testament counterpart, it is designed to provide the student with basic biblical literacy upon which to build. And like Old Testament, this course is intended to provide a forum in which students can explore their faith, ask questions openly, learn to respect different interpretations, see the connection between Bible and other academic disciplines.

Introduction to Old Testament

The Old Testament course at Christ School satisfies the Religion requirement for graduation. Students of any form are eligible, but it is most appropriate for forms V-VI (grades 11-12). The course is intended to provide a one-semester overview of the Hebrew Scriptures, including also a brief discussion of the Apocrypha. It is designed to provide the student with basic biblical literacy upon which to build. In no way is it exhaustive in scope; it should be seen a beginning, not an end. Our hope is that the course will also provide a forum in which students can explore their faith, ask questions openly, learn to respect different interpretations, see the connection between Bible and other academic disciplines, and most importantly, be led by the Holy Spirit to see how the Holy Bible might inform their lives.

WORLD LANGUAGES

Introduction to World Languages

Eighth grade students spend approximately four weeks learning about each of the four languages taught at Christ School: Arabic, Latin, Mandarin, and Spanish. Students acquire basic speaking, listening, reading, and writing skills as they address everyday topics such as school, family, calendar, and leisure activities in a cultural context. *(Students do not receive High School credit for this course)*

Arabic I, II, III & IV

This class introduces students to the basics of Modern Standard Arabic through the study of the Arabic alphabet, calligraphy, vocabulary and common words and phrases. There is also a strong cultural component to this class with emphasis on the geography, art and history of North Africa and the Middle East using supplementary tools such as film, literary fiction and non-fiction, internet and personal travelogues.

Latin I

Latin I is designed to equip the beginning student with such basic skills as vocabulary recognition, understanding of inflected endings and simple grammatical constructions. The primary focus of this course is to introduce the student to the actual reading of Latin literature. Utilizing a reading-based approach, this course draws heavily upon Roman history and culture as well as Mediterranean geography. Latin I reinforces many of the concepts that students learn in the Ancient/Medieval History course. Latin I students are expected to take the National Latin Exam.

Latin II

Latin II requires the student to broaden his vocabulary recognition as well as to recognize and use more complex grammatical constructions. Understanding the physical layout of ancient Rome and identifying the significant buildings and areas of the city itself are central tenets of this course. Readings and cultural material converge upon the late Republican and early Imperial periods as students disentangle the political upheaval of the late Republic. Latin II students are expected to take the National Latin Exam.

Honors Latin III

Caesar, Cicero, Horace and Ovid are just a few of the authors whose works students read. In this course, the student has the opportunity both to examine the intricacies of the Roman political/military system during the Republic. Students at this level are encouraged to take the SAT II in Latin and are expected to take the National Latin Exam.

Honors Latin IV

Latin IV will consist of reading and translating original Latin authors (Cicero, Catullus, and perhaps Vergil) and analyzing their literature in greater detail than Latin III. There will be no new grammar and only idiomatic syntax to be learned.

Mandarin I (C*hinese)*

This is an introductory course in Mandarin Chinese Language and Culture. Students learn beginning listening, reading, speaking, and writing skills. They are introduced to basic Chinese syntax and vocabulary and are exposed to Chinese culture. This course is challenging and highly engaging for students interested in learning about Chinese language and culture.

Mandarin II & III (Chinese)

After a thorough review, students in this course will continue the study begun in Mandarin I. Students will continue to develop speaking, listening, reading and writing skills and become increasingly familiar with the cultures of Chinese-speaking countries and knowledgeable about the relationship between language and culture.

Spanish I

Spanish I provides the student with an introduction to a wide range of grammar topics, cultural aspects, and common language structures. Emphasis is placed on speaking, comprehension, writing, and the ability to read a variety of level-appropriate Spanish materials.

Spanish II

Greater communication is placed on communication skills, reading, culture and customs, and grammatical structures. The goal of understanding native Spanish through the use of a variety of resources is emphasized. While grammar and tense formation are central topics, speaking skills are stressed.

Spanish III

Spanish III is designed to develop a greater sense of facility in everyday language skills and to deepen students' understanding of more complex grammar structures. Increasing their cultural understanding of the Hispanic world, this course also strengthens the student's ability to read and write.

Honors Spanish IV

While being prepared to take the College Board's AP exam, the Spanish IV student will increase his communication skills, widen his understanding of increasingly complex language structure, and strengthen his reading and writing skills.

Honors Spanish V

Students are introduced to key cultural terms for critical discussion; vocabulary is expanded through conversational activities, newspaper articles, and films. A complete Spanish grammar review is presented and practiced through homework, class discussion and class projects. The class is conducted in Spanish, and it is expected that the student will use the language throughout the class.

Spanish Language Culture and Conversation

This course will be offered to students who have completed the requirement of Spanish II. (The completion of Spanish III is strongly encouraged.) The course will focus on Latin American culture, history and politics through media. We will watch a series of films and read a wide variety of newspaper and magazine articles in addition to a sampling of short stories. We will discuss the major themes of class, race, discrimination and the Latin American politics that surrounds these issues. Also included in the topics of discussion will be immigration, music, art, and the importance of family. The course will be taught in English and Spanish and the films will be presented with subtitles. The assignments will consist of work both in English and Spanish. Student class participation in discussion, critique and analysis is vital to this course.

Honors Levels

Honors level classes are offered in all specific levels of French, Spanish and Latin, depending on student interest and qualification Accelerated pace combined with advanced level readings, translations, rigorous dialogues, and writings are expected for those taking honors level World Languages.

FINE ARTS

Fine Arts 8th Grade

In the Fall an overview of studio art and an overview of the music program for eighth graders is offered in conjunction with the Humanities 8 program. *(Students do not receive High School credit for this course)*

Studio Art I

Studio Art I is a semester elective for all students, regardless of previous experience or training, who are interested in exploring their artistic abilities. Students will work with basic media (drawing, printmaking, painting, sculpture, and ceramics) in a variety of studio projects. Emphasis is on individual planning and decision making within the framework of fundamental principles of design.

Advanced Art

Advanced Art is a semester elective for students who demonstrate interest in and commitment to the creation of art. The focus is on two-dimensional (drawing, painting, printmaking) and three-dimensional (ceramics, sculpture, metalworking) art. This course is designed for each student to work independently under the instructor's supervision in developing his individual course of study.

Music Appreciation

Students will learn the piano keyboard and elements of music notation in this term course. Scales and their structures, intervals, chords, rhythmic notation, sight reading and ear training are explored so that the students gain an understanding of how music is written and printed notation is translated into sound.

Music Practicum

Private music lessons are offered on campus. Meeting times will be determined by the student and instructor. There is an additional fee.

Choir

Previous experience is not required for participation in the Christ School Choir, but a decent voice, a reasonable ear, and a love and enthusiasm for music are important. The choir performs a spectrum of music, both sacred and secular, and sings daily.

Music Technology

Music Technology is an introduction to the recording studio and basic recording concepts. Topics include but are not limited to microphones, analog and digital recorders, sounds boards, signal processing, synthesizers, Podcasts and web radio.

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL Beginner, Intermediate, Advanced, Transition

Christ School is an ideal place for an international student to hone his English skills in preparation for attending a college or university in the United States. As the learning of a second language is a complex process, involving an infinite number of variables, students need adequate preparation if they are to be successful in academic classes. The ESL classroom is a safe-haven for risk-taking, and the curriculum is designed to ensure success at each level of achievement. And, the ESL Transition Course enables the international student to move successfully into regular classes in English or history. *This class has an additional fee per quarter.*

LEARNING RESOURCES

Learning Skills

Learning Labs focus on organization, time management and study skills and strategies, as well as content area academic support. The intent in Learning Labs is for all students to become responsible, independent, diligent learners. Referral to the program originates from one of four sources; parent, student, school, or psychologist/ counselor/ physician. It is essential that a student enter the Program's environment with a willingness to enhance his academic success and to develop more responsible and intentional academic habits and skills. The Learning Resource Program's instructors communicate frequently with each student's teachers and his advisor to assess ongoing progress. A student may enter or exit the Learning Resource Program at any quarter. *(Students do not receive High School credit for this course)*

Evening Classroom Study Hall-Supported

Under the direction of the Director of the Learning Resource Program, proctors are available to help students (limited number per classroom) maintain focus and productivity during the evening study period. Each night, Sunday through Thursday, students are assisted with their work. The intent is for proctors to oversee student organization, prioritization, and assignment completion.

This class has an additional fee per quarter. (Students do not receive High School credit for this course)

ELECTIVES

Journalism/Yearbook

Journalism produces the Christ School yearbook; *The Angelus*. The course involves instruction and hands-on experience in writing and editing skills, design, computer applications, photography, sales and public relations, and financial management. Writing skills are addressed in class, along with time management strategies and the establishment of deadlines.

Test Prep

In the competitive world of college admissions, students should always be looking for ways to improve their application. One of the most effective ways to do so is by improving a student's test scores. In our Test Prep class, students will have the opportunity to learn the techniques and strategies to raise their SAT and ACT scores, with the potential for dramatic improvement. The class will cover all areas of both tests, involve in depth practice with real test questions, and give the opportunity to take full-length practice tests. Ultimately, students will be prepared with the knowledge and confidence necessary to attain their highest potential. *(Students do not receive High School credit for this course)*

Architecture of Leadership

The course will provide students with a better understanding of the nature of leadership, the leadership style of those who are effective in particular environments as well as a student's own leadership style. Biographies and films on leaders, past and present, guest speakers and discussions will form the basis for exploring the architecture of leadership.

ACADEMIC RESOURCES

The Information and Media Center, St. Dunstan's Library

St. Dunstan Library supports the curriculum and mission of the school by providing access to information resources in a variety of formats. The present library, opened in 1993, is in lower Wetmore Hall beside the computer lab and works closely with the school's technology department in providing instruction in the use of educational and information technology.

The library collection includes approximately 9500 books and 600 films (VHS and DVD) as well as subscriptions to 45 periodicals and to online research databases. The ten computers for student use provide software tools and high speed Internet access. The library is also a wireless Internet access point for students with laptop computers. Study tables and carrels, a comfortable reading area, and a conference room offer places for students and faculty to read, work, hold seminars, and view films.

The library also offers assistance and instruction in the research process and on topics such as copyright and maintaining integrity in academic work. In addition, St. Dunstan Library seeks to promote the practice and love of reading by offering a wide variety of both leisure and reading materials and by sponsoring reading programs such as the annual 8th grade North Carolina Battle of the Books.

Nichol's Multi-media Classroom

Extensive multi-media technology is currently located in the computer lab. This classroom equipment includes a powerful multi-media computer, a digital projector, distance learning equipment, and a "soft-board" which allows the teacher's lecture notes to be recorded onto the school's server for later study and review.

Learning Resource Program

An added support service, the Learning Resource Program provides additional academic structure. Taking the place of a study hall and taught by professionals, Learning Resource time is used to assure that students understand what is expected of them in each of their core subjects. The Learning Resource teacher, working with a class of no more than four students, teaches time management skills, study and class preparation tactics, as well as assists with writing assignments or other course-specific needs. Learning Resource can be prescribed as a condition of admission or it can be chosen at the discretion of the student's family. In either case, a student is assigned to Learning Resource on a quarter-by-quarter basis and uses the service for only the period of time deemed necessary. Not a cure-all, Learning Resource is simply one way to increase the odds for academic success. There is an additional fee for this service; charges are billed as incurred.

College Counseling

Christ School graduates are accepted by some of the finest colleges and universities in the region and the country. Formal planning for post-secondary studies begins during the freshman and sophomore years, but intensifies during the junior year when the student meets individually with the College Counselor to discuss both preparations for the standardized tests and college options which will best suit the student as an undergraduate.

Early in the senior year, students take the SAT I and/or the ACT for the second time and begin submitting their applications to selected colleges. The faculty supports each student's applications with extensive evaluations and written recommendations.

Every year college admissions officers visit our campus in the fall and winter to give 11th and 12th graders a chance to further familiarize themselves with colleges they may wish to consider through individual and small group discussions.