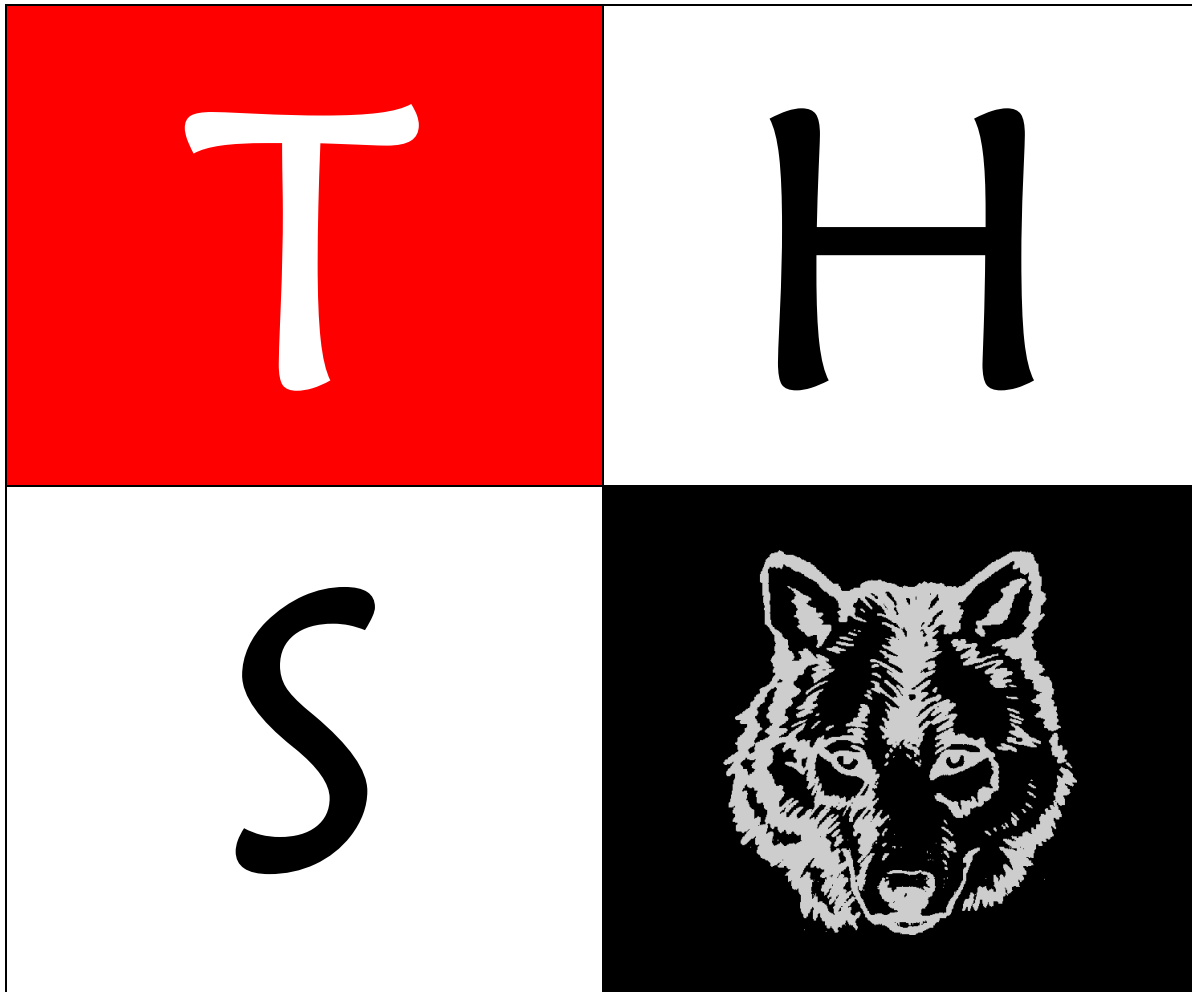


Trinity High School



Course Catalog

2010-2011



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Mission Statement

The Trinity High School Community will provide an education modeled on state standards, as well as a safe educational environment, which promotes student self-worth, responsible citizenship and critical thinking skills necessary for productive, meaningful participation in a global society.



Expected Schoolwide Learning Results (ESLR's)

1. Demonstrate competency in course and state standards for all areas of study. This will include analysis, synthesis, implementation and skills.
2. Learn and work as an individual and a group member in a variety of contexts in preparation for future endeavors.
3. Demonstrate effective organizational and communicative skills.
4. Develop and apply technology skills appropriate to each curricular area.



Trinity High School Graduation Requirements

Subject Areas	Class of 2011	Class of 2012	Class of 2013	Class of 2014
Algebra I	10	10	10	10
Career Pathway	30	40	40	40
English 9	10	10	10	10
English 10	10	10	10	10
English 11	10	10	10	10
English 12	10	10	10	10
Electives	90	80	80	80
Foreign Language/Fine Art	10	10	10	10
Government/Economics	10	10	10	10
Life Science	10	10	10	10
Math	30	30	30	30
Physical Education	20	20	20	20
Physical Science	10	10	10	10
US History	10	10	10	10
World History	10	10	10	10

TOTAL CREDITS NEEDED TO GRADUATE:

Class of 2011 = 270

Class of 2012 = 270

Class of 2013 = 270

Class of 2014 = 270

Every student MUST pass Algebra 1 and the Exit Exam in English and Mathematics!



COLLEGE ENTRANCE REQUIREMENTS

California State University and University of California

A – G List Minimum Requirements

<p>A—History 2 years American Government, or AP(one semester course) US History, or AP World History, or AP</p>	<p>E—Language other than English 2 years Spanish 1 Spanish 2 Spanish 3</p>
<p>B—English 4 years English 9, or Pre-AP English 10, or Pre-AP English 11, or AP English 12, or AP</p>	<p>F—Visual/Performing Arts 1 year Art 1 Advanced Art 3-D Art Band Drama Advanced Drama Digital Photography Vocals</p>
<p>C—Mathematics 3 years Algebra 1B Geometry Algebra 2 Pre-Calculus Calculus AP</p>	<p>G—Elective Courses 1 year Economics, or AP (one semester) Earth Science AP Psychology Agricultural Science 1 Agricultural Science 2 Natural Resource AVID Senior Seminar AP Computer Science A</p>
<p>D—Laboratory Science 2 years One year life science AND one year physical science Biology, or AP Chemistry, or AP Physics, or AP</p>	<p>Or additional courses from the A—F requirements</p>



Course



Descriptions



Agriculture

Ag Science 1/Earth Science:

(10 credits/1 year)

This course is designed primarily for freshmen but open to all 1st year Ag students. This course is the introductory course for the agricultural program. Students that complete this course will meet the THS physical science graduation requirement. The California Earth Science Standard will be presented in a forum that emphasizes their application in the agriculture industry. Energy in the earth systems, structure of the atmosphere, California Geology, our place in the universe, soils, climate, plant and animal physiology, plant and animal nutrition, budgets for Ag projects, record keeping, plant propagation, animal husbandry, and leadership skills. Students will be members of the Future Farmers of America (FFA) and will have the opportunity to have a Supervised Agriculture Experience Project.

Ag Science II, III, and IV:

(10 credits/1 year)

This course is for 2nd, 3rd, and 4th year Ag students. It meets the life-science graduation requirements of THS and meets the CSU elective requirements. Course topics will include animal reproduction, plant reproduction, soil and water analysis, and advanced techniques in plant propagation, business skills, parliamentary procedure, leadership skills, forestry, natural resources, mapping, compass, surveying, wildlife management, soil management, and water management. Students may take this course up to three times for credit as the curriculum will rotate each year.

Intro to Ag Mechanics:

(10 credits/1 year)

This course is for students to begin their Ag Mechanics shop experience. This will typically be freshmen and sophomores. Students will cover topics including: Shop safety, Oxy-Acetylene welding, Arc Welding, rope work, tool fitting and sharpening, electrical, and plumbing skills. Students may take this course for a 2nd year for credit They will continue working on their welding skills including horizontal, vertical, and overhead in GMAW, and Oxy-Acetylene welding and begin project construction.

Ag Mechanics (ROP):

(10 credits/1 year)

This course is intended for 2nd, 3rd, and 4th year students that have completed AG Mechanics Intro Course. Priority in this class will be given to juniors and seniors that have completed the Ag Mechanics Intro Course and are in the Agricultural Career Path. This course will include a continuation of the students' welding ability in Oxy- Acc. and Arc Welding through the overhead position. Students that complete this will then continue with advanced welding skills in M.I.G. and T.I.G. They will also have the opportunity for project construction. Other topics will include surveying, concrete, and advanced wiring.



Farm Power (ROP):

(10 credits/1 year)

This course is intended for 2nd, 3rd, and 4th year students that have completed the Ag Mechanics Intro Course. Priority in this class will be given to the juniors and seniors that have finished Ag Mechanics Intro Course and are in the Agricultural Career Path. Students may take this course twice for credit. Topics in this class will include fuel systems, lubrication, electrical systems, brakes and tires, power transmission, trouble shooting, and hydraulics. 1st year students will work primarily on bench activities with small gasoline engines. 2nd year students will have the opportunity to work on individual projects that include engine rebuilding and equipment repair.



Business and Information Technology

Computer Applications (ROP):

(10 credits/1 year)

This course will include the review and presenting of core computer skills, including keyboarding technique and speed (40 WPM), word processing, spreadsheets and database, webpage/multimedia development, computer literacy, ethics, Internet research, presentation software, email and business documents. Students will also prepare for the workplace by researching career opportunities, completing a job application, preparing a resume and cover letter. Utilizes: Microsoft Office Suite, and Adobe Suite software

Business Technology - FBLA:

(10 credits/ 1 year)

Do you like to meet new people? Do you want to travel outside of Trinity County? Do you like to create with technology? Do you like competition? Do you want to be in a club? You will learn about producing videos, various computer apps, personal finance, accounting, web site development, sports and entertainment marketing among others. This class is offered to all students –not just those interested in FBLA (Real World + Technology =FBLA).

Digital Photography (ROP):

(10 credits/ 1 year)

Prerequisite: Computer Applications, or teacher recommendation

This computer-based photo class uses digital cameras, image alteration software and preprint production programs. Students will create a quality personal portfolio of eye catching images which will attest to their acquired talents and skills. Various techniques of image capture, manipulation, and output are presented. Utilizes: Photoshop, Illustrator, Word

Web Macromedia Design/Multimedia (ROP):

(10 credits/ 1 year)

Prerequisite: Computer Applications, or teacher recommendation

This course will cover basic multimedia designs including text, graphics, animation, audio, video as it relates to publishing in both web and hard copy development. Course will also cover all aspects of web design including planning, HTML basics, content and layout, color and design, enhancing with multimedia, publishing, maintaining, and marketing. Introduction to Java, animation and World Wide Web Consortium (W3C) and Web Accessibility Initiative (WAI) formats considered. Yearly project includes creating a web site. Utilizes: Flash, Dreamweaver and Photoshop



Digital Video Design (ROP):

(10 credits/1 year)

Prerequisite: Computer Applications, or teacher recommendation

The production of film and video/DVD presentations is an important field related to graphic communications that has grown over the past decade. This surge in production is indicated by the thousands of videos and DVDs available for purchase, the increase of hundreds of television stations available through cable or satellite, and by the increase of many new motion picture production companies, once dominated by six or seven studios. Additionally, many corporations have turned to producing training videos for employees, and for consumers for specific product inform. This introductory course will introduce students to various phases and processes of video production. The ultimate goal is threefold: 1) To present the student with the opportunity to develop skills and an appreciation of the various phases and processes of video production and its value as an art form; 2) To expose students to world of, and creativity of, telling a story with still and motion pictures, graphics, sound, and speech. 3) To allow students the opportunity to be exposed to, and become proficient in, the creation of motion graphics and video production. Students will learn and experience the complete production process including idea brainstorming, scriptwriting and storyboarding, filming and audio recording, acting, computer editing, and video, CD, or DVD production. Possible example formats include producing; Sports Highlights, Short Film, Memories Montage, Documentary Video, Biography Video, Music Video, Instructional Video, Advertising Commercials, and Public Service PSA Commercials. In order to meet assignment deadlines and production schedules, students will need to rely on: good reading and writing skills, good time management, a positive attitude, and the ability to work in a team setting. Utilizes: Photoshop, Flash, Movie Maker and Adobe Premiere, Comic Life.

AP Computer Science A:

Offered every other year

(10 credits/ 1 year)

Prerequisite: Computer Applications, Algebra 1, English 9, or teacher recommendation

The AP Computer Science A course is an introductory course in computer science. This course is designed to prepare each student to complete the AP Computer Science A Exam. However, more importantly, it is hoped that each student receives a solid foundation in logical thinking and problem solving that will serve them well as they begin their post high school journey in any discipline they choose. Because the design and implementation of computer programs to solve problems involve skills that are fundamental to the study of computer science, a large part of the course is built around the development of computer programs that correctly solve a given problem. These programs should be understandable, adaptable, and, when appropriate, reusable. In addition, the responsible use (ethics) of these systems is an integral part of the course. Topics covered will include the APCS Java subset, Searching, Sorting, Object Oriented Programming, Data Structures, and Analysis in the timing and efficiency of Algorithms. Utilizes: Java software.



English

English 9:

(10 credits/ 1 year)

Meets college prep requirement

Ninth grade English at Trinity High School is designed to train students to communicate through the written and spoken word through analyzing words and word roots, reading comprehension, appreciating and responding to literature, as well as written strategies, conventions and applications. Students will study the process of writing complete sentences utilizing accurate punctuation and capitalization, as well as developing the components of speech.

Pre-AP English 9:

(10 credits/1 year)

Meets college prep requirement

This course is designed to examine multicultural literature while addressing the California English Language Arts standards. Heavy emphasis is placed upon analysis and written communication. There will also be systematic vocabulary development. The curriculum is designed to be more rigorous than English 9 and lay the foundation for skills necessary in the Advanced Placement classes. It is recommended for students who are on the path to Advanced Placement. Homework: approximately half an hour daily.

English 10:

(10 credits/1 year)

Meets the college prep requirement

Tenth grade English at Trinity High School is designed to further train students to communicate through the written and spoken words through analyzing words and word roots, reading comprehension, and appreciating and responding to literature. Emphasis will also be placed on writing strategies, conventions, and applications.

Pre-AP English 10:

(10 credits/1 year)

Meets the college prep requirement

This course addresses the California English Language Arts standards for 10th grade. It is intended for students who want to move onto AP level courses and continues to build the skills necessary to those courses. Students will be expected to write cohesive compositions demonstrating their knowledge of literary language and concepts. Vocabulary will be taught systematically throughout the school year. The curriculum is designed to be more rigorous than English 10 and is recommended for students who have excelled in their previous English courses. Homework: approximately 40 minutes daily.



English 11:

(10 credits/1 year)

Meets college prep requirement

This course is meant to develop the skills that students have learned in their previous English courses. It focuses on the development of American literature from early exploration to the modern day era. The curriculum addresses the California English Language Arts standards for 11th grade. Students will be expected to read and respond to the text both verbally and through well structured composition. Homework: 15-20 minutes daily.

AP English 11/AP Language and Composition:

(1 year/ 10 credits)

Meets college prep requirement

Meets UC/CSU honors requirements

This course meets University of California and California State University advanced course standards. While studying American literature, students should develop advanced writing and literary analysis skills as well as study and use various rhetorical strategies. Students will be exposed to extensive vocabulary study, the history of the English language, and formal grammar. Students who take and pass the AP exam with a score of 3 or higher may qualify for college placement or credit. Highly recommended for GATE students
Homework: 20-40 minutes daily.

English 12:

(10 credits/1 year)

Meets college prep requirement

This course continues the development of the speaking, listening, reading, writing, and conventions skills taught during the previous three years. The textbook focus is on British and World literature. Writing assignments will emphasize essays, narratives, researched-based writing, and poetry. There will be extensive class discussions focused on literary analysis and writing. Homework: 20-30 minutes daily

AP English 12/AP Literature and Composition:

(1 year/ 10 credits)

Meets college prep requirement

Meets UC/CSU honors requirements

This is a culmination of the previous AP courses. The literary emphasis is upon British Literature and masterpieces of World literature. Students are expected to refine their essay writing; literary analysis skills, including an extensive study of literary terms; and speaking ability in preparation for college level work. Extensive outside reading from works of acknowledged literary masters is required. Students who take and pass the AP exam with a score of 3 or higher may qualify for college placement or credit. Highly recommended for GATE students

Homework: 20-40 minutes daily.



Fine Arts

Art 1:

(10 credits/1 year)

This is a general introduction to the elements of art, principles of design and general art criticism and aesthetic judgment. Included is an extensive unit on drawing designed to teach students to draw or improve their existing skills. Students will be challenged by a variety of color and design problems using a variety of media such as watercolor, pastels, and ink. Emphasis is placed on effort, ability to follow directions correctly, creative problem solving, critical thinking skills, and craftsmanship.

3-D Art:

(10 credits/1 year)

This is a general craft class, designed to provide experience in a variety of craft activities while learning about the principles of design and elements of art. Subjects to be covered will include sculpture, glass fusing, glass etching, and ceramics. Emphasis is placed on following directions, critical thinking, creative problem solving, and craftsmanship.

Advanced Art:

(10 credits/1 year)

Grade of "C" or better in Art 1, or approved portfolio and consent of instructor recommended

This Advanced Level art builds on the foundational skills taught in Art 1. The course introduces the student to additional media and uses, as well as more challenging creative problems. Advanced techniques in media such as graphite, colored pencil, pen and ink, watercolor, acrylics, computer graphics and mixed media will be introduced. Students will learn about keeping journals, sketchbooks, and altered books as artistic tools. Additional problems will be assigned, intended to challenge the students' creative problem solving abilities. Other class activities will expand on the survey of art history covered in Beginning Art. Many students planning on taking AP Studio Art will begin their portfolio during this course.

AP Studio Art:

(10 credits/1 year)

Grade of "A or B" in Art 1 or Advanced Art, or approved portfolio and consent of instructor

This Advanced Placement art course introduces the student to additional media and uses, as well as more challenging creative problems. Media such as graphite, colored pencil, pen and ink, watercolor, acrylics, computer graphics and mixed media will be used at an advanced level. Additional problems will be assigned, intended to challenge the students' creative problem solving abilities. Other class activities will expand on the survey of art history covered in Beginning Art. After the first grading period work will be primarily independent, involving research, concept development, production and display of their portfolio pieces. Students will create a comprehensive portfolio by the end of the course. Repeating this course



allows the outstanding student in AP Art to pursue their demonstrated interest and abilities on a contractual basis.

Drama:

(10 credits/1 year)

This course teaches the basic skills of acting: facing an audience, movement, creating a character, learning lines, learning how to perform a scene and monologue and the production process. Students work directly with the instructor as decisions are made about costuming, makeup, scenery and props, lighting and sound. Students prepare scenes and monologues for performance and competition. Students will also be studying highlights from the history of drama, as well as reading and analyzing classic plays. Homework is required for memorizing and rehearsing lines, as well as time dedicated to after school rehearsal during production times and also for stage set up and breakdown.

Band:

(10 credits/ one year)

This course prepares students for excellence in instrumental music performance. Students will learn to develop areas of tone production, rhythmic ability, reading music, music vocabulary, ensemble playing, and performance at the high school level. Students will also be provided formal instruction in music theory and music history as it relates to the repertoire performed. Students will also be required to rehearse and perform outside of regular school hours and be available for a variety of public performances.

Vocals:

(10 credits/ one year)

This course will prepare students to properly memorize and perform a rehearsed musical selection. Students will learn to identify intervals, sing them correctly, sight read pitches and rhythms, and employ proper technique. Diaphragmatic breathing and proper singing technique will be part of this course. Sectional rehearsals will enable students to be prepared for their singing proficiencies. Opportunities will be available for a variety of public performances. Students may be required to attend special practices after school.



Foreign Language

Spanish I:

(10 credits/ 1 year)

Spanish I covers basic vocabulary and introduces students to the diverse and fascinating cultures of Latin America and its geography. Students use learned vocabulary to write simple sentences, read simplified literary sources, and speak in basic conversational Spanish. Students learn to use the present tense of AR/ER/IR verbs and can create simplified paragraphs and conversations. Regular assignments and testing assess student progress.

Spanish II:

(10 credits/ 1 year)

Spanish I (passed with a C or better). Spanish II continues the vocabulary and cultural study of Spanish I with more in depth study of different facets of each unique culture. Verb forms from the previous year are reviewed and in addition to those, students learn the preterit, present progressive and command forms of verbs. Writing, reading and speaking skills are developed even further and students learn skills required to form more complex sentence structures. Regular assignments and testing assess student progress.

Spanish III:

(10 credits/ 1 year)

Spanish I and Spanish II (passed with a C or better). Spanish III continues the vocabulary and cultural study of Spanish II with more in depth study of different facets of each unique culture. Verb forms from the previous year are reviewed and in addition to those, students learn the imperfect, future and subjunctive forms of verbs. Writing, reading and speaking skills are developed even further and students learn skills required to form more complex sentence structures. Regular assignments and testing assess student progress.



History/Social Science

U.S. History:

(10 credits/ 1 year)

Meets one of the Social Science Graduation requirements—meets UC/CSU history requirements. This course of study is designed to survey American history with an emphasis on the founding of our nation, and on the political, social, and economic trends and developments of the 19th and 20th Centuries. Students are required to take subjective and objective tests, develop vocabulary, write essays in and out of class, participate in directed class discussions, and take/organize class notes.

AP U.S. History:

(10 credits/ 1 year)

The objective of this course is to provide an intensive and accelerated study of United States History with the goal of passing the AP Examination in May. The course is divided into two semesters: (1) A Continent of Villages to 1400 through The Civil War and Reconstruction to 1877; and (2) Conquest and Survival: The Trans-Mississippi West to 1900 through The Conservative Ascendancy and the New Millennium to the present. The areas of concentration include historical, political and economic history coupled with an intense study of cultural and intellectual institutions and their development. These areas will be studied from a variety of perspectives with the hope of providing a balanced view of U.S. history. This course is taught at the college level.

World History:

(10 credits/ 1 year)

Meets one of the social science graduation requirements—meets in UC/CSU history requirements. This course of study is designed to survey World History with emphasis on political, social, economic, and geographical aspects of most major cultures, and on the developments of western civilizations. Additionally, students will study how world cultures have become increasingly interdependent and affect world affairs.

AP World History:

(10 credits/ 1 year)

The objective of this course is to provide an intensive and accelerated study of World History with the goal of passing the AP Examination in May. The course is divided into two semesters: (1) Human Origins and Human Cultures, 5 million BCE – 10,000 BCE through The Rise of World Religions, 2500 BCE – 1500 CE; and (2) The Movement of Goods and Peoples, 1000 – 1776 through Evolving Identities, 1979 - present. The areas of concentration include historical, political and economic history coupled with an intense study of cultural and intellectual institutions and their development. These areas will be studied from a variety of perspectives with the hope of providing a balanced view of world history. This course is taught at the college level. The pace is demanding—about one textbook chapter and one supplemental



reading per week. You will have an average of one exam and/or one quiz each week, in addition to requirements for chapter outlines and note cards.

Economics:

(5 credits/1 semester)

Meets one semester of the social science graduation requirements and meets college prep requirements

Economics is a semester course required for graduation. This course is designed to give each student a better understanding of the market system, the business cycle, credit, and micro/macro economics. The course should help improve each student's decision making as an individual consumer, worker, voter, and investor in our global economy. We will use the National Economic Standards as our criteria for study. Students will be required to participate in directed class discussions and be prepared for testing on factual and subjective materials to be presented.

U.S. Government:

(5 credits/1 semester)

Meets one semester of the social science graduation requirements and meets college prep requirements

American Government is a semester course required for graduation. This course is designed to give each student a better understanding of relevant concepts in U.S. government and politics.

This course should help improve their decision making as an individual voter and worker in the United States. The students will greatly improve their abilities to examine political information and rhetoric. They will also learn to analyze and compare the daily operation of our government to that of the leadership in other countries. We will use the National American Government Standards as our criteria for study. Students will be required to participate in directed class discussions and be prepared for testing on factual and subjective materials to be presented.

AP Government/Politics U.S. :

(5 credits/1 semester)

Meets one semester of the social science graduation requirements and meets college prep requirements

This course explores the political theory and everyday practice that direct the daily operation of our government and shape our public policies. The express purpose of this course is to prepare students to take the AP Exam for U.S. Government and Politics. The course is taught on a college level and it requires a substantial amount of reading and preparation for every class. The objectives of this course go beyond a basic analysis of how our government "works." Students will develop a critical understanding of the strengths and weaknesses of the American political system, as well as their rights and responsibilities as citizens.



AP Macroeconomics:

(5 credits/1 semester)

Meets one semester of the social science graduation requirements and meets college prep requirements

The purpose of an AP course in Macroeconomics is to give students a thorough understanding of the principles of economics that apply to an economic system as a whole. Such a course places particular emphasis on the study of national income and price-level determination, and also develops students' familiarity with economic performance measures, the financial sector stabilization policies, economic growth, and international economics.

The objective of this course is to provide an intensive and accelerated study of

Macroeconomics with the goal of having each of you pass the AP Examination in May. The areas of concentration are set forth below. These areas will be studied from a variety of perspectives with the hope of providing a balanced view of Macroeconomics. This course is taught at the college level.

AP Psychology:

(10 credits/1 year)

The objective of this course is to provide an intensive and accelerated study of psychology, with particular emphasis on developing essential higher level thinking skills relating to crucial areas covering the discipline, including but not limited to—research methods, neuroscience and behavior, sensation and perception, consciousness, learning, memory, and cognition. The course is intended to emphasize content knowledge. Content is the most important aspect of the course. You will be challenged to understand and analyze complex, fundamental, and sometimes controversial issues and ideas. The purpose of this course is to help you develop the capacity to utilize these analytical skills to express clearly the knowledge gained in content from the text and other sources and with the additional goal of passing the AP Psychology exam in May.

The Great Ideas (Academic Decathlon):

(10 credits/ 1 year)

This course is designed to deepen knowledge of multi-disciplinary subjects and the ideas associated with them that have been advanced by the greatest minds in human history. Students will learn how to plot a spaceship trajectory to Jupiter using Newton's equations. They will learn how great musicians like Beethoven and Mozart lived and why their music is so astonishingly revolutionary. Why the Impressionist painter Van Gogh "cut off his ear"? How did Einstein discover that time slows down when velocity approaches the speed of light or how one twin can age 20 years while the other age only 5 years? What were the survival tactics of a single ancient Greek warrior when his phalanx clashed with the enemy shield to shield? What happened the night Mary Shelley wrote *Frankenstein*? The Great Ideas course offers cross-curricular information that covers physics, philosophy, history, math, music, biology, economics, chemistry, art, and other disciplines as humanity's greatest achievements are explained and applied to everyday life. During the course, a team will be selected that will represent Trinity High School in the California Academic Decathlon.



Industrial Technology and Manufacturing

Wood I:

(10 credits /1 year)

In this course the student will be introduced to the basic concepts of woodworking. Topics included are: CNC manufacturing, calculation of bill of materials, drawings and patterns, procedures and methods for assembling projects, the safe use of machines, mechanical drafting, the use of common hand drafting tools, sketching, orthographic and isometric drawing, dimensioning, and an introduction to computer aided drafting. Upon completion of this course students will be able to design a project, calculate the cost, and safely manufacture it. This course will give students the necessary background for advanced cabinet making, construction, and CAD/CAM classes. Ample time is allowed in class to complete all assigned work. Students will use and adapt to new technology in the construction field. If, due to absences or extenuating circumstances the student misses class, it is the responsibility of the student to find out what work was missed and thereby arrange a time to make up the work after school or as homework. Notebooks will be required.

Construction (ROP):

(10 credits /1 year)

This course is designed to provide students with skills and knowledge of the construction industry. The student will have instruction and hands-on experience in: safety, setting various types of forms, placement of concrete, reading and interpreting blueprints, floor framing, wall framing, ceiling and roof framing, stair layout, interior and exterior trim, installation of doors and windows, layout of wiring, plumbing, and insulation. The majority of projects are hands projects around campus. Job seeking skills will be stressed along with the requirement of a notebook. Students enrolling in this course should have an interest in outdoor work, have fair eye-hand coordination, manual and finger dexterity. Responsibility of the student to find out what work was missed and thereby arrange a time to make up the work after school or as homework. Notebooks are required for this course.

Cabinet Making (ROP):

(10 credits /1 year)

Prerequisite: Wood 1

A course designed to acquaint the students with the construction of cabinets. Emphasis will be placed upon the advanced use of tools, materials and equipment in a proper, safe and considerate manner. Students will develop a set of drawings based on applicable codes and standards used by the industry. The student will develop a materials list and calculate costs from a set of prints. Students will be shown (and use) a variety of methods on the construction and assembly of their cabinets. Students will select and use finishing materials correctly and safely. Note: this is not a required course. Students are expected to pay for materials taken home in the form of projects.



Math

Algebra Readiness/Concepts:

Prerequisite: Teacher recommendation or score on the mathematics placement test.
(10 credits/1 year)

Algebra Concepts is intended for students who are not prepared to enter Algebra I. Teachers knowledgeable in the content area will use a variety of strategies to help students achieve. Differentiated instruction will provide various ways to demonstrate competency and create additional time learning.

Algebra 1A:

Prerequisite: Algebra Readiness with a “C” or better or a satisfactory score on the mathematics placement test.
(10 credits/1 year)

Algebra 1A is intended for students who have previously struggled in introductory algebra. The course meets the Algebra I requirement with successful completion of Algebra 1B for entry into 4-year colleges. Half of algebra will be covered. Topics covered include: solving equations, solving inequalities, graphing, fractional exponents, parallel and perpendicular lines.

Algebra 1B:

Prerequisite: Algebra 1A with a “C” or better or a satisfactory score on the mathematics placement test.
(10 credits/1 year)

Algebra 1B is intended for students who have previously struggled in introductory algebra. The course meets the Algebra I requirement for entry into 4-year colleges. The second half of algebra will be covered. Topics covered include: rational expressions, quadratic equations and functions, and applications and graphs of quadratic functions.

Algebra I:

Prerequisite: Algebra Concepts with a “C” or better or a satisfactory score on the mathematics placement test.
(1 year/ 10 credits)

Algebra I is intended for students who have previously been successful in introductory algebra. The course meets the Algebra I requirement for entry into 4-year colleges. An entire year of algebra will be covered. Topics covered include: solving equations, solving inequalities, graphing, fractional exponents, parallel and perpendicular lines, rational expressions, quadratic equations and functions, and applications and graphs of quadratic functions.



Geometry:

Prerequisite: Algebra I with a “C” or better or a satisfactory score on the mathematics placement test.

(1 year/ 10 credits)

Meets UC/CSU Math requirement

Geometry is the study of properties of figures and logic as applied to geometric figures. Additionally, basic algebra will be reviewed and the student’s algebraic skills reinforced. The curriculum includes points, lines, and planes, angles, perpendiculars, congruent triangles, triangle inequalities, constructions, loci, parallel lines, polygons, Pythagorean Theorem, right triangle trigonometry, circles, area, volume, coordinate geometry, transformations, and similar figures.

Algebra 2:

Prerequisite: 9-12th grade, Passed Algebra 1 and Geometry with a grade of C or better.

(1 year /10 credits)

In Algebra 2 the students improve and apply their algebraic skills, they also study additional topics. The curriculum includes the following: Linear equations, inequalities, matrices, determinants, conic sections, exponents, logarithms, sequences, series, probability and statistics. The class is required for admission to a 4 –Year University.

Pre-Calculus:

Prerequisite: 11-12th grade, Passed Algebra 2 with a grade of C or better.

(1 year /10 credits)

In pre-calculus, the students apply their algebraic skills and develop the additional concepts and skills necessary for calculus. Curriculum content: linear relations and functions, system of equations, polynomial and rational functions, trigonometric functions, vectors, parametric equations, polar coordinates, complex numbers, conics, exponential and logarithmic functions, sequences, series, combinatorics, probability, statistics and data analysis, introduction to calculus. The class is highly recommended by 4 – year universities.

AP Calculus AB:

Prerequisite: 11-12th grade, Passed Pre-Calculus with a grade of B or better.

(1 year /10 credits)

Calculus is the study of change, in the same way that geometry is the study of shape and algebra is the study of operations and their application to solving equations. A course in calculus is a gateway to other, more advanced courses in mathematics devoted to the study of functions and limits, broadly called mathematical analysis. Calculus has widespread applications in science, economics and engineering and can solve many problems for which algebra alone is insufficient. There is much overlap between the two calculus courses, but the Calculus BC is an extension of calculus AB rather than an enhancement. Common topics require a similar depth of understanding. Both courses are intended to be challenging and demanding. AP courses in calculus consist of a full high school academic year of work and are comparable to calculus courses in colleges and universities. Students who take an AP Calculus



course should do so with the intention of placing out of a comparable college calculus course. The use of a graphing calculator in AP Calculus is considered an integral part of the course. Students should use this technology on a regular basis so that they become adept at using their graphing calculators. Students should also have experience with the basic paper-and-pencil techniques of calculus and be able to apply them when technological tools are unavailable or inappropriate. Students will learn how to (1) plot the graph of a function within an arbitrary viewing window, (2) find the zeros of functions and solve equations numerically, (3) numerically calculate the derivative of a function, and (4) numerically calculate the value of a definite integral. Due to low expected enrollment, as many as eight different advanced science and math courses will be held during a single period. Since the instructor's time must be shared, the students must develop strong personal discipline as they are expected to gain most of their understanding from reading, from the application of that understanding to actual problems and from working with other students in study groups. The instructors will back them up, in the classroom and by phone, with tutoring and occasional brief lectures.

AP Calculus BC:

Prerequisite: 11-12th grade, Passed Calculus AB.

(1 year /10 credits)

Calculus is the study of change, in the same way that geometry is the study of shape and algebra is the study of operations and their application to solving equations. A course in calculus is a gateway to other, more advanced courses in mathematics devoted to the study of functions and limits, broadly called mathematical analysis. Calculus has widespread applications in science, economics and engineering and can solve many problems for which algebra alone is insufficient. There is much overlap between the two calculus courses, but the Calculus BC is an extension of calculus AB rather than an enhancement. Common topics require a similar depth of understanding. Both courses are intended to be challenging and demanding. AP courses in calculus consist of a full high school academic year of work and are comparable to calculus courses in colleges and universities. Students who take an AP Calculus course should do so with the intention of placing out of a comparable college calculus course. The use of a graphing calculator in AP Calculus is considered an integral part of the course. Students should use this technology on a regular basis so that they become adept at using their graphing calculators. Students should also have experience with the basic paper-and-pencil techniques of calculus and be able to apply them when technological tools are unavailable or inappropriate. Students will learn how to (1) plot the graph of a function within an arbitrary viewing window, (2) find the zeros of functions and solve equations numerically, (3) numerically calculate the derivative of a function, and (4) numerically calculate the value of a definite integral. Due to low expected enrollment, as many as eight different advanced science and math courses will be held during a single period. Since the instructor's time must be shared, the students must develop strong personal discipline as they are expected to gain most of their understanding from reading, from the application of that understanding to actual problems and from working with other students in study groups. The instructors will back them up, in the classroom and by phone, with tutoring and occasional brief lectures.



AP Statistics:

Prerequisite: Algebra 2 with a grade of C or better.

(1 year/ 10 credits)

Statistics is the branch of mathematics that deals with the collection and interpretation of data. The data may come from a wide range of disciplines such as life and physical sciences, psychology, business and economics, sociology, and sports. Methods of gathering data will be learned, including experimental design, experimental simulations, surveys and field observations. Some data may be directly measured and recorded by the student during laboratory activities, school wide or community polling or field observations. The results of the data collections will be interpreted using scatter plots, density curves, normal distributions, and linear and least square regressions. Sampling distributions will be covered. Furthermore, the foundations of probability and inference will be used to make predictions concerning the data. The students will learn about expectations, random variables, confidence estimations and modeling. Graphing calculators will be used extensively: students are encouraged to have a TI 83 or TI 84+ graphing calculator.



Non-Departmental

Career Exploratory- Geography;

(2.5 credits/ 9 weeks)

This is a course that focuses on the current and historical political boundaries of our world as well as the distribution, processes, and effects of human populations on the planet. Units of study include population, migration, current and historical political boundaries, culture, language, religion, economic development, industry, agriculture, and urban geography. Course objectives are to (a) introduce students to the countries of the world as well as their political and economic status (b) the systematic knowledge of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface (c) the methods of geographers, and (d) spatial and regional concepts.

Career Exploratory - Robotics:

(2.5 credits/ 9 weeks)

This is a hands-on class where the principles of science and engineering are taught in a project based environment. Through instruction in basic properties of matter, students will create mechanisms which will illustrate the concepts of motion and overcome the physical barriers to their goal. Scientific methods and approaches will join with innovation and creativity to challenge students to design complex systems from simple materials. A final project will demonstrate the students' understanding of academic standards while displaying their own unique approach to problem solving.

Career Exploratory – Strategies for Success:

(2.5 credits/ 9 weeks)

This course is designed to enhance students' academic study strategies. Students will engage in a variety of research-based study strategies and skills which will enable them to achieve their full academic potential in all of their academic classes. Units of study may include goal setting, organization and time management, learning styles, communication skills, introduction to Cornell Note taking, research skills, and test taking skills. The activities presented in this course will allow students to develop a repertoire of skills which will afford them the opportunity to become more effective and efficient learners in the high school setting and beyond.

Career Exploratory -Visual and Performing Arts:

(9 weeks/ 2.5 credits)

The 9 week Art section of the Career Exploratory Course is designed to help the student take a look at different Careers available in the Visual Arts field. They also see how visual design is used in a variety of careers not normally thought of as Art related. Students get to explore a variety of media, while being taught artistic principles in order to find out what they might enjoy.



AVID I:

(10 credits/1 year)

This AVID elective course is designed for students with a 2.0-3.5 GPA who are motivated to do well and have the desire to attend a four-year college after graduation. AVID elective courses at all grade levels are designed to prepare students for entrance into four-year colleges and universities. The courses emphasize rhetorical reading, analytical writing, public speaking, collaborative discussion strategies, tutorial inquiry study groups, preparation for college entrance and placement exams, college study skills and test taking strategies, note taking and research.

AVID II:

Prerequisite: None; AVID 1 recommended

(10 credits/1 year)

This AVID elective course is designed for students with a 2.0-3.5 GPA who are motivated to do well and have the desire to attend a four-year college after graduation. This course builds on and continues the skills presented in the AVID 1 elective such as rhetorical reading, analytical writing, public speaking, collaborative discussion strategies, tutorial inquiry study groups, preparation for college entrance and placement exams, college study skills and test taking strategies, note taking and research.

AVID Junior/Senior Seminar:

Prerequisite: AVID 1 or 2, AVID Junior/Senior Seminar in 11th grade to qualify in 12th grade (1year/10 credits)

Co requisite: Enrollment in at least one Honors or Advanced Placement course or in a college-transferable course is recommended in both the 11th and 12th grade years.

The AVID Senior Seminar is a two-year interdisciplinary course for AVID juniors and seniors planning to attend a 4-year college. The course is designed for those students who elect to take a course that prepares them for the rigor required for college work. Students will engage in higher levels of WIC-R (writing, inquiry, collaboration and reading) strategies than experienced in prior years of AVID. This higher level thinking, reading, writing and oral language skills are needed to prepare students for the level of work required to produce a culminating research project at the end of the senior year.

AVID Tutor:

Prerequisite: Teacher consent; 4-hour AVID tutor training

Credits: -

The Avid Tutor, under the guidance of the AVID teachers and coordinator, will provide leadership in collaborative groups on a regular basis (2 to 4 days per week) throughout the academic year. They will be trained to tutor with the Socratic Method and work with small groups of middle school or high school students under the supervision of a teacher in an AVID classroom during the school day. Tutors serve as guides and facilitators of students' learning through questioning, writing, thinking, and discussing. Tutors will also perform the duties of a teacher's assistant, grading binders, filing, etc.



Physical Education

Physical Education I:

(10 credits /1 year)

This course is designed to give the students the opportunity to learn through a comprehensive sequentially planned program in accord with the California Model Content Standards for Physical Education. Students develop proficient movement skills and expand their capabilities for independent learning. This program includes the skill development and the application of rules and strategies in several of the following different movement forms: 1) health-related fitness activities, 2) aerobic fitness, 3) team sports, 4) individual and dual sports, 5) gymnastics, 6) combatives, 7) dance, and 8) recreational games. Students will also study the Health Education Content Standards for the State of California

Physical Education II:

(10 credits /1 year)

Prerequisite: PE 1

This course is designed to give the students the opportunity to learn through a comprehensive sequentially planned program in accord with the California Model Content Standards for Physical Education. Students develop proficient movement skills and enhance their capabilities for independent learning. This program will expand upon the principles and activities covered in PE 1 as well as introduce students to new concepts. The program includes the skill development and the application of rules and strategies in several of the following different movement forms: 1) health-related fitness activities, 2) aerobic fitness, 3) team sports, 4) individual and dual sports, 5) gymnastics, 6) combatives, 7) dance, and 8) recreational games.

Elective Physical Education:

(10 credits /1 year)

Prerequisite: PE 1/PE 2

Team Sports & Weight Training Physical Education

This course is designed to give students the opportunity to learn weight training concepts and fitness techniques used for obtaining optimal physical fitness. Students will benefit from comprehensive weight training and cardio respiratory endurance activities. Students will learn the basic fundamentals of weight/strength training, aerobic training, and overall fitness training and conditioning. Nutrition will be analyzed as it relates to athletic performance. Students will apply these principles to sport specific activities. Furthermore, students will explore careers related to the fields of health, nutrition, physical education, and athletics ***OR***

Yoga, Pilates, and Circuit Training Physical Education This course is designed to introduce students to the basic postures, breathing techniques, and relaxation methods of yoga and Pilates. Students will begin to experience the benefits of stretching, moving, and breathing freely as they relieve built up stress, learn to relax, and ultimately get more out of day-to-day life. Circuit training utilizing strength bands, exercise balls, aerobic steps, and hand weights will be incorporated to further the benefits of muscle toning. The aim of this course is to promote vibrant health and to tap the body's latent energy reserves.



Sciences

Earth Science:

(10 credits/1 year)

Earth Science is an introductory physical science course designed to cover the state standards related to Earth science. It includes a study of the materials which make up the Earth, geology and geochemistry, the shaping and formation of the Earth's surface and the forces within which drive those changes including plate tectonics, volcanism, mountain building, and earthquakes. A study of the Earth's oceans and atmosphere discuss the dynamics of temperature and weather including global and local patterns. A study of natural resources and their use develops an understanding of the role humans play in the ongoing changes in their environment as well as the importance of conservation and the development of alternative sources. The place of the Earth in the universe is considered during a study of astronomy, including the solar system, our galaxy, the Milky Way, and other galaxies and objects beyond. As a preparation for Biology, special attention will be paid to the necessary conditions for the development and continuation of life.

Biology:

(10 credits/1 year)

Biology is designed to be a college-prep level course that covers a broad range of topics related to life forms on this earth. Genetics and human physiology are central to this course of study, but time will also be devoted to other topics related to other facets of life on earth. Our goal is to become well-educated in the interrelationships that are so fundamental to life. Nothing stands alone; everything, living and non-living is related either directly or indirectly. The topics covered in biology are in a sequential order that best supports conceptual learning in depth and breadth and covers the content of the state standards. The concept of layering is built into the sequential order as much as possible so that no previous knowledge is left unrelated or disconnected. The idea is that the holistic picture of life becomes interwoven tighter and tighter as the course moves forward. It is impossible, impractical, and illogical to attempt to separate biology from the physical sciences of chemistry, physics, and astronomy. Attempts will always be made to bring the disciplines together so that a full and harmonious picture of life is maintained. Practical lab experiences, class demonstrations, and audio-visual media are used to support conceptual learning.

AP Biology:

(10 credits/1 year)

AP Biology is designed to be the equivalent of a two-semester college level introductory biology course. Students attempting this course should have successfully completed biology and chemistry before attempting AP Biology. Many of the topics covered in biology will be revisited in much greater depth and focus. You will find your prior exposure to biology and chemistry extremely valuable as you venture deeper into these familiar topics. The course emphasizes practical lab experiences to give support and evidence of scientific principles and



concepts. The major goal of this course is to develop a conceptual framework of biological topics so that the interconnections and applications of biology become deeply understood. Our attempt will be to view biological science as a process and to understand that it is a science of constant change and renewal that requires factual knowledge and analytical skill. As we progress through the course content, the interrelationships found in the physical and biological world should become more and more apparent and appreciated; our world view will change due to this experience.

Chemistry:

(10 credits/1 year)

This is an upper division class for juniors and seniors who are planning on attending college, or who want to explore the physical sciences in greater detail. Our goal is to form a good understanding of the concepts and subject matter of basic chemistry. There will be weekly homework and weekly laboratory assignments that require the use of algebra, good writing skills and organization skills.

AP Chemistry:

Prerequisite: high school Chemistry (or instructor's permission), Algebra 2

(10 Credits/ 1year)

Chemistry is the science concerned with the composition, behavior, structure, and properties of matter, as well as the changes it undergoes during chemical reactions. It is a physical science for studies of various atoms, molecules, crystals and other aggregates of matter whether in isolation or combination, which incorporates the concepts of energy and entropy in relation to the spontaneity of chemical processes. The AP Chemistry course is designed to be the equivalent of the general chemistry course usually taken during the first college year. For some students, this course enables them to undertake, in their first college year, the second-year work in the chemistry sequence at their institution or to register in courses in other fields where general chemistry is a prerequisite. For other students, the AP Chemistry course fulfills the laboratory science requirement and frees time for other courses. Students who take an AP course should do so with the intention of placing out of a comparable college course. There will be two hours of lab per week. The student will gain experience in using chemical apparatus, observing chemical reactions, recording data, calculating, interpreting results and communicating conclusions. Due to low expected enrollment, as many as eight different advanced science and math courses will be held during a single period. Since the instructor's time must be shared, the students must develop strong personal discipline as they are expected to gain most of their understanding from reading, from the application of that understanding to actual problems and from working with other students in study groups. The instructors will back them up, in the classroom and by phone, with tutoring, occasional brief lectures and labs.

Physics- Differences among the four physics courses

The four physics courses differ from each other in emphasis and depth. Physics and AP physics B are both survey courses that cover all the major topics in classical and modern physics while differing in depth of the required understanding. AP Physics C (Mechanics) is calculus based



physics focusing exclusively on classical Newtonian mechanics. Physics C (Electricity and Magnetism) is calculus based physics focusing exclusively on classical electro-magnetism.

Physics:

**Prerequisites: Algebra 2
(10 Credits/ 1year)**

Physics is a natural science; it is the study of matter and its motion through space-time and all that derives from these, such as energy and force. More broadly, it is the general analysis of nature, conducted in order to understand how the world and universe behave. Physics is designed to prepare the students to take introductory physics courses in college and to enables them to register in courses in other fields where general physics is a prerequisite. The course will include a hands-on laboratory component, with a minimum of 12 student-conducted laboratory investigations representing a variety of topics covered in the course. The student will gain experience in experiment design, observation and measurement of real phenomena, organization, display, and critical analyze of data, error and uncertainty analysis, drawing inferences from data, communication of results, proposals for experiment improvements and questions for future study. Each student should complete a lab notebook or portfolio of lab reports. Due to low expected enrollment, as many as eight different advanced science and math courses will be held during a single period. Since the instructor's time must be shared, the students must develop strong personal discipline as they are expected to gain most of their understanding from reading, from the application of that understanding to actual problems and from working with other students in study groups. The instructors will back them up, in the classroom and by phone, with tutoring, occasional brief lectures and labs.

AP Physics B:

**Prerequisites: Algebra 2, Pre-calculus (or concurrent enrollment)
(10 Credits/ 1year)**

Physics is a natural science; it is the study of matter and its motion through space-time and all that derives from these, such as energy and force. More broadly, it is the general analysis of nature, conducted in order to understand how the world and universe behave. The AP Physics B course is designed to be the equivalent of an introductory general physics course usually taken during the first college year. AP Physics B covers the same topics as in high school physics, but in greater depth. This course prepares students for the calculus based physics that some would take in their first year of college. For other students, this course enables them to register in courses in other fields where general physics is a prerequisite. For still other students, the AP physics course fulfills the laboratory science requirement and frees time for other courses. Students who take an AP course should do so with the intention of placing out of a comparable college course. The course will include a hands-on laboratory component comparable to introductory college-level physics laboratories, with a minimum of 12 student-conducted laboratory investigations representing a variety of topics covered in the course. The student will gain experience in experiment design, observation and measurement of real phenomena, organization, display, and critical analyze of data, error and uncertainty analysis, drawing inferences from data, communication of results, proposals for experiment improvements and questions for future study. Each student should complete a lab notebook or portfolio of lab reports. Due to low expected enrollment, as many as eight different advanced



science and math courses will be held during a single period. Since the instructor's time must be shared, the students must develop strong personal discipline as they are expected to gain most of their understanding from reading, from the application of that understanding to actual problems and from working with other students in study groups. The instructors will back them up, in the classroom and by phone, with tutoring, occasional brief lectures and labs.

AP Physics C (Mechanics):

**Prerequisites: AP Calculus AB (or concurrent enrollment in AP calculus AB or BC)
(10 Credits/ 1year)**

Physics is a natural science; it is the study of matter and its motion through space-time and all that derives from these, such as energy and force. More broadly, it is the general analysis of nature, conducted in order to understand how the world and universe behave. The AP Physics C course is designed to be the equivalent of a calculus based physics focusing exclusively on classical Newtonian mechanics. It is usually taken during the first college year. For some students, this course enables them to register in courses in other fields where general physics is a prerequisite. For still other students, the AP physics course fulfills the laboratory science requirement and frees time for other courses. Students who take an AP course should do so with the intention of placing out of a comparable college course. The course will include a hands-on laboratory component comparable to introductory college-level physics laboratories, with a minimum of 12 student-conducted laboratory investigations representing a variety of topics covered in the course. The student will gain experience in experiment design, observation and measurement of real phenomena, organization, display, and critical analyze of data, error and uncertainty analysis, drawing inferences from data, communication of results, proposals for experiment improvements and questions for future study. Each student should complete a lab notebook or portfolio of lab reports. Due to low expected enrollment, as many as eight different advanced science and math courses will be held during a single period. Since the instructor's time must be shared, the students must develop strong personal discipline as they are expected to gain most of their understanding from reading, from the application of that understanding to actual problems and from working with other students in study groups. The instructors will back them up, in the classroom and by phone, with tutoring, occasional brief lectures and labs.

AP Physics C (Electricity and Magnetism):

**Prerequisites: AP Calculus BC (or concurrent enrollment in AP calculus BC)
(10 Credits/ 1year)**

Physics is a natural science; it is the study of matter and its motion through space-time and all that derives from these, such as energy and force. More broadly, it is the general analysis of nature, conducted in order to understand how the world and universe behave. The AP Physics C course is designed to be the equivalent of a calculus based physics course focusing exclusively on classical Newtonian mechanics. It is usually taken during the first college year. For some students, this course enables them to register in courses in other fields where general physics is a prerequisite. For still other students, the AP physics course fulfills the laboratory science requirement and frees time for other courses. Students who take an AP course should do so with the intention of placing out of a comparable college course. The course will include a hands-on laboratory component comparable to introductory college-level



physics laboratories, with a minimum of 12 student-conducted laboratory investigations representing a variety of topics covered in the course. The student will gain experience in experiment design, observation and measurement of real phenomena, organization, display, and critical analyze of data, error and uncertainty analysis, drawing inferences from data, communication of results, proposals for experiment improvements and questions for future study. Each student should complete a lab notebook or portfolio of lab reports. Due to low expected enrollment, as many as eight different advanced science and math courses will be held during a single period. Since the instructor's time must be shared, the students must develop strong personal discipline as they are expected to gain most of their understanding from reading, from the application of that understanding to actual problems and from working with other students in study groups. The instructors will back them up, in the classroom and by phone, with tutoring, occasional brief lectures and labs.



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