

Liberal Arts and Science Academy High School

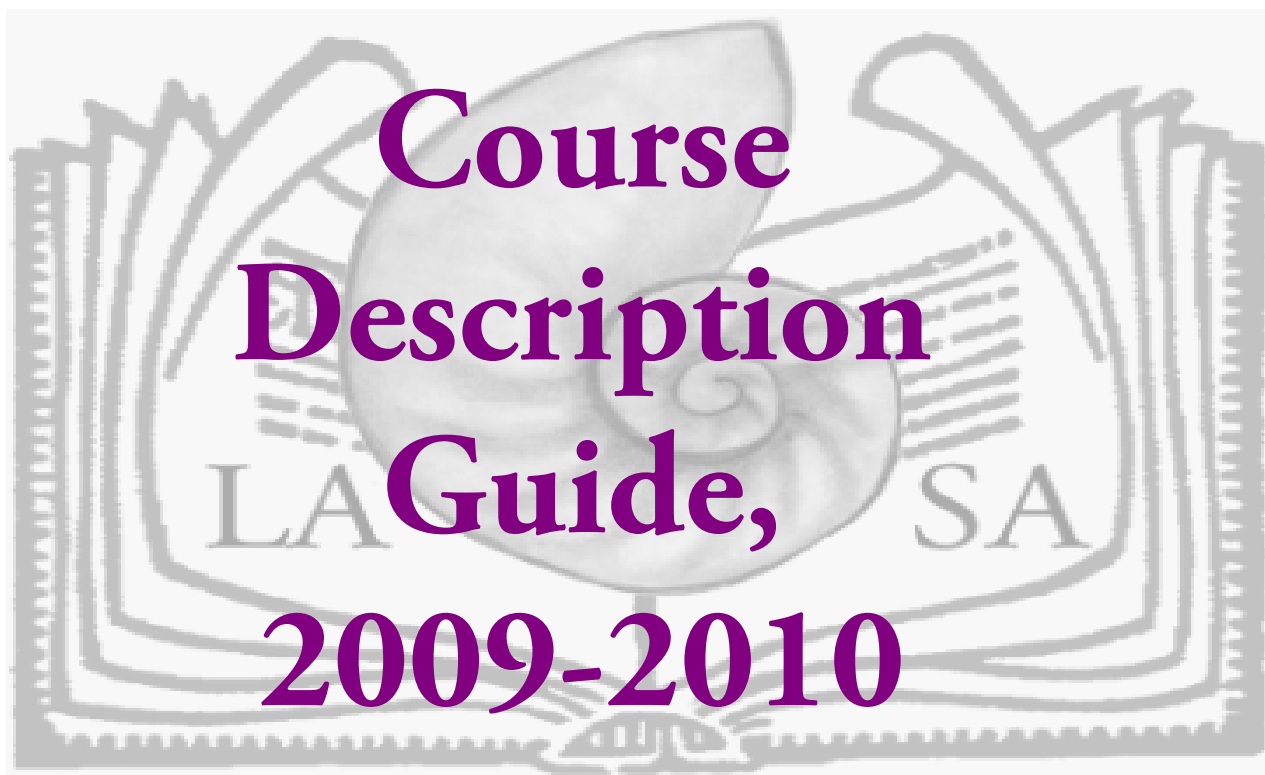


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English

English I Magnet

Grade Placement: 9

Credit: 1.0

Prerequisite: None

The magnet level freshman English course is designed to teach critical reading and analytical writing skills. The curriculum not only starts students on the path of collegiate analysis of text, but also introduces the notion of writing as a craft. As students read texts ranging from historical masterpieces to compelling contemporary works, arranged in an order from less difficult to more challenging, they begin practice in written analysis based on annotations of specific portions of the work. In addition to novels, students read poetry, short fiction and non-fiction. Students also engage in periodic creative writing, group projects and presentations.

English I Topics

Grade Placement: 9

Credit: 1.0

Prerequisite: None

Moving chronologically from the Ancient World into the period of Modern English -supplemented by contemporary poetry, short stories and non-fiction – students in this class build upon their analytical skills in critical reading, discussions and academic writing. Like English I magnet, the writing process focuses on commentary and analysis of annotations of the text; these annotations are designed to funnel into larger papers or projects by the end of the year. Designed for the student who truly thrives in the humanities, this course also includes creative writing, group projects and presentations.

English II Magnet

Grade Placement: 10

Credit: 1.0

Prerequisite: English I Magnet

Second year magnet English explores some of the foundational works of the Western Canon. Students will cover works from the classical world, the Renaissance, the Age of Reason and the Romantic revolution. These texts are aligned to complement the study of World History in Social Studies. Contemporary poetry, short fiction and non-fiction will be used to “speak back” to these traditional texts. This course builds upon the close reading skills of freshman year, as well as the systematic method of teaching academic writing - combining small annotation assignments into larger papers by second semester. The writing sequence aims to ground students in a thorough, structured essay style that will form the basis of a convincing scholarly voice for college writing. Students improve the precision and weight of their vocabulary through the systematic analysis of Latin and Greek influence on English language and thought.

English II Topics

Grade Placement: 10

Credit: 1.0

Prerequisite: English I Magnet Or English I Topics

Topics students follow a similar chronology to English II Magnet with the addition of philosophical implications as well as literary and rhetorical conventions. This curriculum is aligned to complement Topics World History and includes an

interdisciplinary research paper. From this research, students also create an interdisciplinary class presentation on a humanities artifact.

English III Magnet

Grade Placement: 11

Credit: 1.0

Prerequisite: English II Magnet

Magnet AP English III is excellent preparation for the English Language AP test as well as for authentic, high order college writing. Formatted around the AP curriculum, students engage in rhetorical analysis, style evaluation, literary criticism, vocabulary and grammar studies. Students read and interpret a wide variety of American writing with an emphasis on post-Civil War and modern literature including novels, plays, poetry, essays and short fiction. The course showcases the traditional icons of American literature – Whitman, Fitzgerald, James, Faulkner, Williams, Morrison and Miller. The course will also use selections from contemporary writers in order make the students into better “global citizens,” a focus of the newly revised AP test requirements.

English III Topics

Grade Placement: 11

Credit: 1.0

Prerequisite: English II Magnet, English II Topics

Topics AP English III is the third step in a sequence that hones the academy student’s talent for self-statement into a useful academic style. By engaging in several forms of language study - rhetorical analysis, style evaluation, literary criticism, vocabulary and grammar studies – students at the end of their junior year have expanded their strategies for formal and informal college writing. Students read and interpret a wide variety of American writing with an emphasis on post-Civil War and modern literature. Students will analyze novels, plays, poetry, essays and short fiction that cause them to read broadly, both for philosophical concerns and stylistic and formal issues. While the course showcases the traditional icons of American literature – Whitman, Fitzgerald, James, Faulkner, Williams, Morrison and Miller, for example – students devote concentrated study to the accomplishments of the Harlem Renaissance, women in American literature, Jewish-American literature and the Beat Generation. The heart of the course lies in training students to employ their personal wit and style in the service of keener academic observation.

Magnet AP English IV

Grade Placement: 12

Credit: 1.0

Prerequisite: Magnet English III

Magnet AP English IV provides excellent practice for the AP English Literature exam as well as direct teaching of the personal narrative as support for the college application process. Students engage in critical reading and analytical writing based on a how contemporary works speak back to classics from the Western Canon. These novels and plays are supplemented by poetry, short fiction and non-fiction works. Students have fully

mastered the system of annotations from earlier magnet level English courses and now focus on developing an authentic literary voice in their analytical prose. Also included in the curriculum are creative writing, group projects and presentations.

Topics AP English IV

Grade Placement: 12

Credit: 1.0

Prerequisite: Magnet English III or Topics English III

Modeled after an honors level university literature course, Topics English IV begins by introducing formal first person to student writing, as well as mastering the analytical thesis statement. Students continue to move toward an understanding of the crucial interrelationships among dynamic thinking, thesis writing, and writing in general. With British Literature from Shakespeare to post-colonialism as the core readings, students understand the basic elements of the major literary movements as they are linked to cultural and historical context. In addition to extensive practice of the critical reading and analytical writing requirements of the AP English Literature exam, as well as direct teaching of the personal narrative in order to support students through the college application process, students are asked to stand in the place of the critic and level evaluative criticism on a variety of texts, including poetry, short fiction and non-fiction.

Tolkien's Universe

Grade Placement 11-12

Credit:0.5

Prerequisite: None

If Elves in Middle Earth are more important to you than Elves in space, then this is the course for you. Named as the second most loved book in Great Britain in a recent BBC poll, this class will chart its way through Tolkien's *Lord of the Rings*, supplementing the text with Peter Jackson's recent film adaptations, as well as other works by Tolkien. One of the most cohesive artistic creations, Tolkien's Middle Earth, his 'Universe', contains a complex web of mythology, religion, linguistics, history, theology, and artistry. The class will immerse itself in the world Tolkien created, and attempt to extract from its myths the truths about our own world Tolkien was attempted to illuminate, because, as Tolkien said about myth in conversation with C.S. Lewis, "as speech is invention about objects and ideas, so myth is invention about truth."

Creative Writing

Grade Placement: 10-12

Credit: 1.0

Prerequisite: None

The student in creative writing defines him or herself as a writer – at least for the duration of the semester. In terms of craft, students engage in writing exercises that hone skills that are non-genre specific, such as voice, specific detail and point of view, as well as use professional contemporary writers as models for study and for original work. Most importantly, though, the course focuses on the development of personal writing projects designed by the student. Some work on short collections of poetry, others fiction and still others memoir or drama. After students begin work on their projects, the focus

on activity shifts from exercises to whole class writing workshops and revision.

Screenwriting

Grade Placement: 10-12

Credit:0.5

Prerequisite: None

Unlike more traditional creative writing courses, screenwriting requires students to think visually and create fiction in the most profitable and increasingly popular genre. Dialogue and description are emphasized in screenwriting, so students must observe their peers' dialects and vocal mannerisms in order to succeed. They must also learn to disregard internal senses, such as smell and taste, and focus only on what can be seen or heard. Internal thought processes are also irrelevant in screenwriting, so characterization is achieved entirely through actions and appearance. Over the course of the semester, students will write an original short script, the first act of a feature-length script, and an outline for a full-length, feature film. Students will work collaboratively and critique their classmates' work in writing workshops. Additionally, the course will incorporate both films and professional screenplays, including scripts for *The Sixth Sense*, an early draft of *Minority Report*, and *Thelma and Louise*. Film analysis will focus on excerpts from films that exemplify ideal characterization, dialogue, and structure. Clips will be shown from *The Sixth Sense*, *Thelma and Louise*, *Iron Jawed Angels*, *Eternal Sunshine of the Spotless Mind*, and *Adaptation*.

Electronic Magazine

Grade Placement: 9

Credit: 1.0

Prerequisite: None

A block class designed as the humanities answer to science and technology, students work in groups to solve the problem of creating an on-line magazine. Students work to implement personal research in a socially relevant topic, explore this topic through a variety of writing genres, match the topic with graphic design and publish their magazine on the internet. Professional graphic designers serve as a panel of judges for the project; they also offer support to the process in general. Students also go on field trips to a variety of publishing companies and graphic design firms and explore various media to use as models.

Great Ideas

Grade Placement: 10

Credit: 1.0

Prerequisite: None

This course builds on the skills learned in freshman and sophomore year English and social studies classes, and guides students through writing full-length analyses and research papers. We will consider a variety of works in the fields of literature, philosophy, history, psychology, art, architecture, anthropology, film, theater and music—areas of study known collectively as "the humanities." Works will be considered in context, discussing author intent and the characteristics of major literary

movements. However, this class will also connect thematic elements between texts of widely differing time periods and geographic regions in order to examine how peoples throughout history have thought about some of the fundamental experiences of human life. Most of the works we will consider are “short”—examples include surrealist paintings, Chinese philosophical treatises, and South American short stories—but each unit also involves the intensive study of one longer work. The course will culminate in a research paper and presentation which each student will complete individually.

Songwriting

Grade Placement: 11-12

Credit: 0.5

Prerequisite: None

Students learn how to write and perform their own songs. Every three weeks each student performs a new original composition (live or recorded) for the class. We workshop the songs, improving the quality of the music and building confidence in performance. By the end of the school year each student will have written an album’s worth of songs. In the fall semester the class learns the history of modern recorded music, listening to everything from Al Jolson to Daft Punk. We listen to and discuss examples of many musical genres: classical, opera, Tin Pan Alley, hymns, work songs and protest songs, blues, Dixieland, ranchero, jazz, Broadway, polka, gospel, swing, hillbilly, rock and roll, surf, country, folk revival, conjunto, soul, R&B, punk, disco, rock, house, hip-hop, electronic, and many others. Various writing and performance projects, collaborative and individual, round out the curriculum. No previous musical experience required.

Literary Magazine II And III

Grade Placement: 11-12

Credit: 0.5 Each

Prerequisite: Creative Writing

Working with submissions from the entire student body, the literary magazine staff creates a literary magazine from raising funding, working with the printing company, editing, design, layout. Divided by genre, students are under the guidance of department editors and then an executive editor. In addition, this course also sponsors a school-wide writing workshop. The superior work product generated by this class exemplifies the collaborative talents of LASA’s humanities students.

Shakespeare Seminar

Grade Placement: 10-12

Credit: 0.5

Prerequisite: None

Students will engage with classic shakespearean text through performance, improvisation, line throwing, dialogue exercises and other “non-traditional” approaches that elevates the concept of “play” above the intellectualism that so often separates students from the insights the bard offers into the human experience. Students will also spend time analyzing a wide variety of directing and interpretative choices that directors have made in film throughout the years.

Hitchhiker’s Guide To Science Fiction

Grade Placement: 10-12

Credit: 0.5

Prerequisite: None

This is the course the science fiction fan has been waiting for: a room full of science fiction fans who can’t wait to discuss their favorite books. Students explore the genre of science fiction by first reading some of the foundational works, *brave new world* and *i, robot*. The evolution of the genre is laid out – social, political and historical context is examined as well. Most of the books that students read, however, represent the best of the contemporary science fiction writers *ender’s game*, *the left hand of darkness*, *the hitchhiker’s guide to the universe*. Students will do some analytical and creative writing; however, the class primarily revolves around discussions, projects and presentations.

Music and Revolution (4932.M300)

Grade Placement: 11-12

Credit: 0.5

Prerequisite:

This is a semester-long elective that examines various topics in American popular music from 1840 to the present. Though obviously not comprehensive, it is a survey of many important genres, such as minstrelsy, vaudeville, work songs, spirituals, ragtime, country and classic blues, jazz, swing, bop, mambo, cool jazz, free jazz, soul, R&B, country, bluegrass, and punk rock. Special emphasis is given to the socio-cultural context of American popular music.

Languages other than English

Latin

Latin I

Grade Placement: 9-12

Credit 1.0

Prerequisite: none

Latin I is an introductory course involving the bases of Latin grammar, Classical Greek mythologies and Roman history. Attention is given to the nuance of the language’s grammar and vocabulary building. Additionally, the coursework assists with basic English grammar and syntax skills. The class helps students acquire the foundation for progression to Latin II and beyond.

Latin II

Grade Placement: 9-12

Credit 1.0

Prerequisite: Latin I

The second year of Latin explores more of the language’s complex grammar, syntax and idiomatic expressions. Students will begin the year reading from the Cambridge series that they began with Latin I and progress to Julius Caesar’s, *‘De Bello Gallico’*. Additionally, students will delve deeper into Roman history, focusing mainly on the Roman Republic period. A more involved inspection of major and minor Greek mythologies will also be explored with emphasis on the literary and historical aspects.

The students will be performing at a college reading level before the end of the academic school year.

Latin III Pre-AP

Credit 1.0

Grade Placement: 9-12

Prerequisite: Latin II

The Latin III program is designed to introduce to the student as many different Roman authors and readings as possible during the academic year. The course begins with writings from Pliny the Younger, circa 1st century AD, and progresses to medieval, liturgical hymns, poems and prose. The last six weeks is devoted entirely to the *Satyricon* of Petronius, a 1st century “novel” that came to be the basis for a few great pieces of Western literature, *Huckleberry Finn* and the *Great Gatsby* to name a couple. The course is primarily a reading course with most grammar components covered during Latin II. However, some of the more complex and obscure nuance of the language is evidenced throughout the course, in particular vulgar speech and idioms. The goal of the course is to give students as much exposure to a variety of Latin authors in the timeframe allowed. Further, the students will be gathering necessary skills to achieve on the Advanced Placement exams the following year.

Latin IV/V Advanced Placement

Credit 1.0

Grade Placement: 9-12

Prerequisite: Latin III or equivalent

Latin AP is designed to achieve college foreign language credit for those students expecting to pursue a college degree. As such, the AP course is structured in almost the exact format as the students will experience later at their universities. The commitment to study, participate in class discussions, complete homework and paper assignments and research necessary topics is crucial to student’s success. The syllabi are mandated by College Board but, the curricula are rotated so that students may take, and receive credit for both Latin IV and Latin V. Vergil’s *Aeneid* is offered on a rotation with the Latin Literature exam which is comprised of the poems of Catullus coupled with Cicero’s ‘*Pro Archia*’ (entire) and selections from his ‘*De Amicitia*’. There will be daily homework assignments, weekly translation or vocabulary quizzes and the end of every six-week grading period will see an exam which mirrors some aspect of an actual AP exam. Overall, the course is structured to give the students a comprehensive understanding of the literature. Translation, reading comprehension, grammatical outlines are the bases of the course along with an understanding of the history, culture and politics of the works assigned.

German

German I

Grade Placement: 9

Credit 1.0

Prerequisite: none

The student with little or no previous training in German will gain an understanding of the language and the culture of the German-speaking world. The curriculum includes the study of the culture and basic communicative skills in listening, speaking, reading, and writing.

German II

Grade Placement: 9

Credit 1.0

Prerequisite: German I

German II is a further study of the skills acquired in level one German. The curriculum includes the study of the culture and basic communicative skills in listening, speaking, reading, and writing.

German III

Grade Placement: 9

Credit 1.0

Prerequisite: German II

German III is intended for students who are motivated to move beyond the standard levels of language study. The curriculum includes extensive use of the language as well as further development of reading and writing skills and the study of literature. This course is recommended for college-bound students who plan to take university placement tests in a world language or who plan to take Advanced Placement German.

Advanced Placement German IV

Grade Placement: 9

Credit 1.0

Prerequisite: German III

AP German is intended for students who are motivated to continue intensive study of the language in preparation for the Advanced Placement examination. The curriculum includes the study of literature and further development of oral/aural skills in the language and will help to prepare students for the Advanced Placement examination in the language. Students who have successfully completed level III of the language are eligible to take this course.

German V

Grade Placement: 9

Credit 1.0

Prerequisite: German III/IV

German V is intended for students who are motivated to continue the study of language. The curriculum includes intense study of literature and further development of oral/aural skills in the language and will help to prepare the student for university-level placement tests in the language. Students who take this course must be able to work independently, as this course may be completed as an independent study.

Spanish

Spanish I

Grade Placement: 9-12

Credit 1.0

Prerequisite: None

In this course students will begin to develop skills in the four areas of listening, speaking, reading, and writing in Spanish. Students will also learn about Spanish culture around the world.

Upon completion of this course, students should be able to:

- Talk about things in the present tense.

- Have an understanding about the preterite tense, and how to use it.
- Engage in basic conversation such as, but not limited to introductions, describing people, places, and things, ordering food, talking about pastimes/activities.
- Write short passages about the above information.
- Have a trained ear, and understand basic spoken Spanish with some inaccuracy.
- Gain an understanding of the similarities and differences in cultural practice and socio-political perspectives of some Latino communities.

Spanish II

Grade Placement: 9-11

Credit 1.0

Prerequisite: Spanish I

In this course, given mostly in Spanish, students will continue to develop skills in the four areas of listening, speaking, reading, and writing in Spanish. Students will also learn about Spanish culture around the world.

Upon completion of this course, students should be able to:

- Handle successfully a limited number of interactive, task-oriented and social situations.
- Ask and answer questions, initiate and respond to simple statements and maintain face-to-face conversation although in a highly restricted manner and with some linguistic inaccuracy.
- Circumlocute in order to compensate for limited vocabulary.
- Narrate in the present and past tense with limited hesitation.
- Read consistently with increased understanding of simple connected texts dealing with a variety of basic and social needs.
- Write short passages, letters.
- Identify similarities and differences in cultural practice and socio-political perspectives of some Latino communities.

Spanish III Pre-AP

Grade Placement: 10-12

Credit 1.0

Prerequisite: Spanish II

In this course, students will continue to develop skills in the four areas of listening, speaking, reading and writing in concert with the examination of Latino culture. Communication—face-to-face, in writing or through reading, is at the heart of second language study. Upon completion of this course, students should be able to:

- Use future and conditional tenses and the subjunctive mood.
- Perfect writing skills.
- Sustain conversations, read, understand and write on daily life topics, communicate feelings, express opinions and make suggestions.
- Discuss several writers of Latino literature and their works.

- Write and present a summative piece about a major cultural topic.

Spanish IV

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Spanish III

An AP Spanish Language course is comparable to an advanced level (5th- and 6th-semester or the equivalent) college Spanish language course. Emphasizing the use of Spanish for active communication, it encompasses aural/oral skills, reading comprehension, grammar, and composition.

The course objectives are to help you:

- understand Spanish spoken by native speakers at a natural pace, with a variety of regional pronunciations, in both informal (interpersonal) and formal (presentational) contexts;
- develop an active vocabulary sufficient for reading newspaper and magazine articles, contemporary literature, and other non-technical writings (websites, letters and emails, advertisements, signs and instructions) in Spanish without dependence on a dictionary;
- express yourself by describing, narrating, inquiring, and developing arguments in Spanish, both orally and in writing, with reasonable fluency, using different strategies for different audiences and communicative contexts.

In this course, special emphasis is placed on the use of authentic source materials and the integration of language skills. Therefore, you should receive extensive training in combining listening, reading, and speaking (or listening, reading, and writing) skills in order to demonstrate understanding of authentic Spanish-language source materials.

Spanish V

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Spanish III/IV

In this course, students will continue to develop skills in the four areas of listening, speaking, reading and writing in concert with the examination of Latino Literature. Literary analysis is at the heart of this study. Upon completion of this course, students should be able to:

- Sustain conversations, read, understand and write on daily life topics, communicate feelings, express opinions and make suggestions.
- Discuss several writers of Latino literature and their works.
- Write and present a summative piece about a major literary topic.

French

French I

Grade Placement: 9–10

Credit: 1.0

Prerequisite: None

French I is an introduction to the French language. Students are expected to take two consecutive years of a world language to satisfy the college prep diploma requirement. Many universities require three years. There will be an emphasis on learning pronunciation, spelling, basic grammar and building a workable vocabulary. Students will learn basic phrases that they must use in the classroom, and begin making simple responses as the year progresses. There will be listening and speaking activities on a weekly basis, including dictations. Students will also learn about Francophone cultures and customs.

French II**Grade Placement: 9-10****Credit: 1.0****Prerequisite: French I**

Students should have a good background in French I. The beginning of the year is devoted to an extensive review of material. Emphasis is placed on listening comprehension, reading, writing, and speaking French. The academic study is enhanced by a correlation of French culture through the use of magazines, books, video tapes, movies, and realias.

French III – Pre AP**Grade Placement: 10-12****Credit: 1.0****Prerequisite: French II**

This course explores all concepts learned in French I and II in depth with an emphasis in culture. The readings focus on a different aspect of the culture learned. Students review and learn new grammar concepts. Students participate in real-life conversations. Class is conducted in French and students are expected to communicate only in French. Students can be introduced to French literature and French novels(intermediate level) at this point.

French IV – AP Language**Grade Placement: 11-12****Credit: 1.0****Prerequisite: French III**

This course is comparable in content and in difficulty to a course in a French composition and conversation to a third year college level. The course emphasizes the use of language for active communication and help students develop the following:

The ability to understand spoken French in various contexts;
A French vocabulary sufficiently ample for reading newspaper and magazine articles, literary text, and other notetchnical writings without dependence on a dictionary; and
The ability to express themselves coherently, resourcefully, and with reasonable fluency and accuracy in both written and spoken French.

Course content can reflect intellectual interests shared by the students and teacher (the arts, current events, literature, sports, etc.)

French V**Grade Placement: 11-12****Credit: 1.0****Prerequisite: French IV**

This course is comparable to a third year college Introduction to French Literature course. This course is designed to introduce students who have advanced language skills to the formal study of a representative body of literary texts in French. Students gain proficiency in the fundamental language skills that enable them to read and understand prose and verse of moderate difficulty and mature content. Students formulate and express critical opinions and judgments in correct oral and written French. Students also, develop the ability to read and analyze critically and to discuss perceptively representative works of French literature.

Japanese**Japanese I****Grade Placement: 9-10****Credit: 1.0****Prerequisite: None**

This is an introductory course designed to give students an understanding of, and ability to use, basic grammar and vocabulary. The course aims to develop all four skills (reading, writing, speaking, and listening). At the end of the year, students should be able to read and write both Japanese scripts and 20 to 30 kanji, and perform basic functions using the present, future and simple past tense.

Japanese II**Grade Placement: 10-12****Credit: 1.0****Prerequisite: Japanese I**

The aim of this course is to expand on the basic level skills. It builds on grammar and vocabulary, as well as more advanced reading and writing skills. Students will be able to read 80 to 100 kanji by the end of the year.

Japanese III**Grade Placement: 10-12****Credit: 1.0****Prerequisite: Japanese II**

Third-year Japanese aims to bring students' linguistic ability to a low-intermediate level. In addition to increasing vocabulary and the knowledge of grammar, students' fluency will be enhanced. Students will be able to read 180 kanji by the end of the year.

Japanese IV Advanced Placement**Grade Placement: 11-12****Credit: 1.0****Prerequisite: Japanese III Pre AP**

The objective of this course is to bring students up to the intermediate level in Japanese. By the end of the course, they will know enough vocabulary and all the major grammar that one would need to function in Japan at a basic level. Students will be able to read 300 kanji by the end of the year.

Japanese IV**Grade Placement: 11-12****Credit: 1.0****Prerequisite: AP Japanese IV**

The aim of this course is to enhance fluency. Students will achieve this by working on projects in Japanese.

Mathematics and Computer Science

Computer Science I

Grade Placement: 9–12

Credit: 1.0

Prerequisite: Algebra I

Computer Science involves the understanding of programming language concepts and how they are applied to problem solving. This course helps students understand how software is written which increases the ability to learn application software through understanding basic concepts. Students learn common algorithms and how to analyze algorithm efficiency, ease of implementation, and maintenance in terms of execution speed and computer memory requirements.

AP Computer Science A

Grade Placement: 9-12

Credit: 1.0

Prerequisite: Algebra I

The Curriculum follows the requirements of the AP Computer Science A level test. Students will learn Object Oriented Programming in JAVA. They will learn variables, simple data structures, program flow control, using predefined classes, designing classes and implementing their own classes.

Computer Science AB

Grade Placement 10-12

Credit: 1.0

Prerequisite: Magnet Computer Science or Magnet AP Computer Science

The curriculum follows the requirements of the AP Computer Science AB level test. The class will focus on program design, efficiency, analyzing algorithms, sorting, advanced Object Oriented concepts (interfaces, abstract classes), and advanced data structures (Lists, stack, queue, trees, maps, sets).

Geometry Magnet

Credit: 1.0

Grade Placement: 9-11

Prerequisite: Algebra I

This course provides students with a firm foundation in plane, solid and coordinate geometry with an emphasis on deductive reasoning and formal proof. The course is designed to expose students to an axiomatic system, requiring strong mathematical justifications while developing geometric intuition and problem solving skills.

Geometry Topics

Credit: 1.0

Grade Placement: 9-11

Prerequisite: Algebra I

Geometry with Topics covers all of the material in the standard Magnet Geometry course, but moves at a faster pace to allow time to investigate a standard topic in more detail as well as study additional topics. Some typical additional topics include: formal logic, non-Euclidean geometry, and basic analytical geometry. This class also offers a deeper historical focus and includes a writing component.

Magnet Algebra II

Grade Placement: 9-12

Credit: 1.0

Prerequisite: Magnet Geometry

Students reexamine axioms and properties of algebra, study linear, quadratic, and higher degree polynomials and their graphs, and review operations with rational numbers, methods of factorization and operations with radicals. Students also review systems of equations. Students are also introduced to higher order systems, matrices and determinants, linear programming, sequence and series, binomial theorem, conic sections, permutations and combinations, logarithmic and exponential functions, basic concepts of probability, and elementary statistics.

Algebra II Topics

Grade Placement: 10-12

Credit: 1.0

Prerequisite: Completion of Magnet Algebra I

Students study all of the concepts presented in Algebra II Magnet as well as additional topics, but at an accelerated pace and in greater depth with an emphasis on proofs and derivations. Additional topics of study include analytic geometry with noncentral conics, partial fractions, and mathematical induction.

Precalculus Topics

Grade Placement: 10-12

Credit: 1.0

Prerequisite: Completion of Magnet Algebra II

Students study all of the concepts presented in Precalculus Magnet as well as additional topics, but at an accelerated pace and in greater depth with an emphasis on proofs and derivations. Additional topics of study include conics with rotated axes, partial fractions, 3D vectors, Power and Taylor series, derivatives of trig functions, implicit differentiation and related rates.

Magnet Precalculus

Grade Placement: 10-12

Credit: 1.0

Prerequisite: Completion of Magnet Algebra II

The precalculus course consists of basic concepts drawn from Trigonometry, Analysis of Function and Analytical Geometry. Topics include trigonometric and circular functions, trigonometric equations and identities, solving triangles, polar coordinates and imaginary numbers, vector application, parametric equations, rotary motion, and the use of functions to model real world problems. Calculators are used when appropriate. Polynomial and rational functions and their graphs are studied in depth. Conic sections are reviewed as well as exponential and logarithmic functions. Mathematical induction is introduced as well as curve fitting for statistical data, limits and basic derivatives. Probability is explored in greater depth if time permits.

AP Statistics

Grade Placement: 10-12

Credit: 1.0

Prerequisite: Algebra II

This course is equivalent to a one semester, introductory, non-calculus based, college course in statistics. Such a course is typically required for majors in engineering, psychology, the health sciences and business. Science

and mathematics students usually take an upper division calculus based course in statistics, for which the AP statistics course will be effective preparation. The major themes of the course are exploratory analysis, designing studies and experiments, and statistical inference. This course requires the ability to write clear arguments and explanations with supporting evidence. Students will learn how to use statistical software and the graphing calculator for analysis.

AP Calculus AB

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Precalculus

This course is intended for students who have a familiar knowledge of analytic geometry, elementary functions, algebra and trigonometry. This is a one-year calculus course, which prepares students for the AB level Advanced Placement examination in calculus. In most universities, a recommended score on the AB exam will give students credit for one semester of college calculus. This course is devoted primarily to differential and integral calculus. Students are exposed to appropriate technology, such as graphing calculators, to assist them in their study.

AP Calculus BC

Grade Placement 11-12

Credit: 1.0

Prerequisite: Precalculus and Concurrent Enrollment in Discrete Mathematics and Differential Equations

This course is intended for students who have a thorough knowledge of analytic geometry, elementary functions, algebra, and trigonometry. Passing the BC Advanced Placement examination awards students with a year's credit in college calculus. In addition to the topics presented in Calculus AB, this course includes vector functions, parametrically defined functions, polar functions, rate of change word problems, Taylor and Maclaurin series, and the use of calculators where appropriate.

Discrete Mathematics

Grade Placement 11-12

Credit: 0.5

Prerequisite: Precalculus and Concurrent Enrollment in AP Calculus BC

This course is used in conjunction with 1st semester BC Calculus in order to extend the concepts developed in the calculus course.

Differential Equations

Grade Placement 11-12

Credit: 0.5

Prerequisite: Precalculus and Concurrent Enrollment in AP Calculus BC

Topics include solving first order differential equations using separation of variables, homogeneous functions, exact equations, integrating factors, and elementary applications as well as solving high order linear differential equations including methods of undetermined coefficients and variation of parameter.

Multivariable Calculus

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Calculus

This course prepares student for possible advanced standing in mathematics after they enter college. Topics include: vectors, partial derivatives, multiple integrals and vector calculus including vector fields, line integrals, Green's Theorem, Curl and Divergence, and Stoke's Theorem.

Number Theory

Grade Placement: 12

Credit. 0.5

Prerequisite: Multivariable Calculus

In this course, students focus upon logic and proof as well as methods of finding solutions. Course topics include prime numbers, unique factorization, modular systems, Diophantine equations, divisibility, quadratic congruencies, the Chinese Remainder Theorem, mathematical induction, and Pell equations.

Mathematics Independent Study

Grade Placement: 12

Credit. 0.5

Prerequisite: Multivariable Calculus

This course allows students whose level of achievement in math enables them to pursue work individually or in small groups with the teacher serving as advisor and resource procurer. Project-based learning is stressed.

Networking I

Grade Placement: 10-12

Credit: 1.0

Prerequisite: Computer Science I or AP Computer Science

Networking II

Grade Placement: 11-12

Credit: 1.0

Networking I

Internetworking I

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Networking II

Internetworking II

Grade Placement: 12

Credit: 1.0

Prerequisite: Internetworking I

Science

Topics Biology

Grade Placement: 9

Credit:

1.0

Prerequisite: 8th grade Science

Imagine a course in which you learn about biomolecules, gel electrophoresis of DNA, bacterial cultures, fermentation of yeast, photosynthesis; discover the microscopic world of protists and bacteria, learn about emerging diseases and their consequences, cell division and its application to diseases such as cancer, and explore the medicinal possibilities of plants. This is Topics Biology, a one-semester block course, in which students focus on topics in biotechnology, immunology,

genetics, and plant molecular biology. Computers are used for research, data analysis and lab simulations. The social and historical impact of science and society are also explored. Long term projects involving tissue culture, embryology, genetic crosses will be used to understand major topics.

Magnet Biology

Grade Placement: 9

Credit: 1.0

Prerequisite: 8th grade Science

Magnet Biology is a special course designed for magnet students on a non-science tract. It approaches major biological concepts through literature. Students will explore major topics by analyzing different forms of literature including science fiction, novels, essays, original research articles, etc. Students will explore concepts through a combination of laboratory explorations and literature and will have in-depth analysis of these ideas via oral and written communication. This is a one-semester block course, in which students focus on topics in biotechnology, immunology, genetics, and plant molecular biology. The social and historical impact of science and society are also explored.

Astronomy

Grade Placement: 11 – 12

Credit: 1.0

Prerequisites: Biology and Chemistry

Astronomy is an elective course. Current discoveries are emphasized and students will do a research project. The first semester topics include a historical review of astronomy; the study of optics and spectroscopy; our solar system and our Milky Way galaxy. Students will become familiar with use of LASA telescopes and make direct observations of the sun. Second semester covers stellar evolution; black holes, quasars, galaxies, cosmology; dark matter; the origin of life and the search for extraterrestrial life. The myths and science of time travel, parallel universes and tunneling will be discussed. Overnight “lock in”s are linked to University of Texas McDonald Observatory where real time images are analyzed by computer in an ongoing search for extra solar planets. Students are encouraged to join the astronomy club and go on field trips to McDonald observatory in west Texas and to NASA in Houston. Astronomy club attends evening observations in conjunction with Austin Astronomical Society and we plan overnight campouts, just outside city lights using LASA telescopes.

Science and Technology (SciTech)

Grade Placement: 9th

Credit: 1.0

Prerequisites: none

Science and Technology (a.k.a. SciTech) recently recognized, as a “National Best Practice” by the American Society of Mechanical Engineers (ASME) is a course for ninth grade or tenth grade transfers with no pre-requisites. SciTech is an accelerated block course science course taught for 2 periods of the school day. The course is completed in one semester of the school year, yet yields one full year of academic credit and delivers one of the credits for the “advanced academic measures” requirement for [AISD Distinguished Academic Program](#) graduation Plan. The course is a student-centered

problem solving curricula, which develops skills in mechanical engineering, physics, engineering graphics, teaming, math modeling, manufacturing (using power and hand tools) and computer processing. The evaluation of the course is based on the successful completion of the course goals, creation of a mechanical device, developed design documentation, and maintenance of a personal logbook about design experience. The SciTech course activity evolves from a four-step design sequence used throughout science, engineering and technology.

Robotics I (Computer applications)

Grade Placement: 10 – 12

Credit: 1.0

Prerequisite: Keyboarding, SciTech, & Algebra I or Teacher approval.

Robotics I is an exploratory course designed to introduce LASA students to the world of high technology through engineering principles. Robotics I is a one-year course covering the topics of computers in communication, electricity, pneumatics, kinematics, robotic sub-systems, teamwork, computer aided design and manufacturing procedures, 3-D modeling and motion testing. We spend time with LEGO Mindstorms robotics operations and in the actual construction of student designed robots. Typical software packages used include Autocad, Solidworks, Inventor, Robolab, MS Office. This course satisfies the Technology Application graduation requirement.

Robotics II (electronics)

Grade Placement: 10 – 12

Credit: 1.0

Prerequisite: Robotics I

The purpose of the Robotics II course is to continue the development of LASA students into the world of high technology through engineering principles. Robotics II is a one-year course continuing the development, understanding, and application of the topics of electricity, data acquisition, pneumatics, kinematics, robotics, teamwork, design and manufacturing procedures, and introducing applications in a competitive environment and the development of robotic technology based community service projects. Typical software packages used include LabView, Autocad, Solidworks, Inventor, Robolab, MS Office. This course satisfies the Technology Application graduation requirement.

Robotics III (Independent study)

Grade Placement: 11 – 12

Credit: 1.0

Prerequisite: Robotics II

Robotics III is a one-year course continuing the development, understanding, and application of the topics within robotics. It affords the students the opportunity to pursue independent interest within the field of robotics which could include, but not be limited to, custom drive trains, data acquisition, end manipulators, encoders, etc....

Anatomy and Physiology

Grade Placement: 11-12 **Credit: 1.0**
Prerequisite: Biology and one other science course;
Chemistry recommended.

Exercise, disease, food choices, ageing -- how do these affect your body? Bioengineering, sports medicine, animal rights, organ transplants, and medical ethics are some of the topics explored in Anatomy and Physiology. We use sophisticated equipment to measure muscle strength, electrical activity of the heart, reflexes, and respiratory volumes. We dissect cats to study body structure and organization, we test the effect of drugs on heart rate, and we explore various organisms to evaluate different body systems. Current issues, such as the biomedical applications of nanotechnology, cloning, the use of modern drugs to regulate behavior, and the physiology of the human body in space are other topics addressed in this yearlong course. Computers will be employed to create multimedia presentations to explore different aspects of human physiology.

Pathophysiology
Grade Placement: 11-12 **Credit: 0.5**
Prerequisite: Anatomy and Physiology

This one-semester class studies human disorders. It is recommended for students who are interested in a medically oriented field or those with an interest in biology or specifically in human diseases. We perform diagnostic tests of urine, and correlate these data to kidney function and to diseases of the body. Students perform diagnostic blood tests for measurement of metabolic health. We run and interpret EKGs to learn about alterations of the cardiovascular system, and we use case studies to evaluate different disease states in the various organ systems. To study various neurological disorders, students will perform skits demonstrating those abnormalities. Students should have taken Anatomy and Physiology before taking this course.

Medical Microbiology
Grade Placement: 11-12 **Credit: 0.5**
Prerequisite: Biology

This lab oriented course studies the organisms that cause disease. It is highly recommended for those individuals interested in a medically oriented field, biological research, or interest in the organisms that cause disease. Students will learn lab techniques to enable them to culture and identify various bacteria, fungi, and viruses. We explore current topics including emerging and re-emerging diseases such as SARS, West Nile, and AIDS; bioterrorism and the types of microbes being used, why they're dangerous, and how to protect against them; and drug use and antibiotic resistance. Students will gain an understanding of the immune system and how it protects the body and the counter mechanisms by which microbes overcome those defenses. Field trips include visits to the State Health Department and the Blood and Tissue Center of Central Texas.

AP Biology
Grade Placement: 11-12 **Credit: 1.0**
Prerequisite: Biology; Anatomy and Physiology highly recommended

This year long course is for students who have a high interest in biology and want to go beyond the first year Biology course. The course stresses topics in biochemistry and genetics, and includes labs using Polymerase Chain Reaction, gene sequencing, and agarous and polyacrylamide gel-electrophoresis. It is suggested that students taking this course have previously taken or are concurrently taking Anatomy and Physiology. AP Biology is a college-level course, which will enable students to place out of college biology.

Topics Chemistry
Grade Placement: 10 **Credit: 1.0**
Prerequisite: Biology

Topics Chemistry is an in-depth study of the microscopic world of molecules, atoms, and subatomic particles for students interested in a science career. Inquiry learning will guide students on a voyage to discovering the relationships among matter, energy, and the living and nonliving worlds. Mathematical problem solving is an integral component of the course used to help understand the scientific laws and principles that govern matter.

Magnet Chemistry
Grade Placement: 10 **Credit: 1.0**
Prerequisite: Biology

Magnet Chemistry is a student-centered, activity-based, issues-oriented chemistry program that encourages small group learning. Activities will include small group discussions and problem-solving, class discussions, chemistry experiments, teacher demonstrations, role-playing, projects, reading and written assignments, guest speakers and a field trip. This is a course that helps students realize the important roles that chemistry will play in their personal and professional lives. They will use chemistry knowledge to think through and make informed decisions about issues involving science and technology, in addition to develop a lifelong awareness of the potential and limitations of these fields. This course is a college preparatory course in a less traditional format for those students who plan to pursue careers in fields other than the sciences, engineering or the medical professions. Students will learn chemical facts and concepts with the needed rigor and detail to understand Chemistry's impact on society. It contains the in-depth study of the role Chemistry has in the use of and conservation of chemical resources (including water, air, fossil fuels and mineral resources), the production of energy from petrochemicals and nuclear power, and the student's health and diet. This course's integrated approach applies chemistry studies to relevant social, economic, and political issues as they relate to chemical concepts.

AP Chemistry
Grade Placement: 11-12 **Credit: 1.0**
Prerequisite: Biology and Chemistry

The AP Chemistry course is designed to serve as an equivalent course to a general chemistry course taken in

the first year of college. This course prepares students to take the AP Chemistry exam toward the end of the academic year. At the end of this class successful students will earn a score on the AP exam that will earn credit and/or waive requirements at most higher level institutions in the country. This is a course geared toward highly motivated students with interests in chemical and physical sciences. AP Chemistry has both the content and the laboratory components of typical college level chemistry courses. The College Board recommends that students who take AP Chemistry should have successfully completed a first-year course in chemistry and have the math skills attained in Algebra I and II. AP Chemistry builds on the skills and knowledge attained in a standard high school course and provides the student with an opportunity to develop a deeper understanding of chemistry and the ability to think critically and to solve problems. AP Chemistry topics include atomic theory, chemical bonding, phases of matter, solutions, types of reactions, equilibrium, reaction kinetics, electrochemistry, and thermodynamics.

Organic Chemistry

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Biology and Chemistry

Organic Chemistry is an introductory course that studies the chemistry of carbon compounds, including polymers and some bioorganic molecules. This program examines the relationship between molecular structure, chemical and physical properties, reactions, and reaction mechanisms. Laboratory work illustrates the principles discussed in the course and provides practical experience in the isolation, purification, and analysis of organic chemicals. The laboratory activities include syntheses of a variety of organic compounds with an emphasis on basic laboratory techniques. The fundamental techniques of infrared and UV spectroscopy, nuclear magnetic resonance spectra (NMR) and chromatography are also learned. This course is ideal for those students who desire to continue studying science, medicine, or wish to acquire additional preparation for the Advanced Placement examination.

Analytical Chemistry

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Biology and Chemistry

Analytical Chemistry is a laboratory-centered course that deals with the analysis of chemical samples to gain an understanding of their chemical composition, structure and function. The course is divided in two sections: qualitative analysis, such as: separation and identification methodologies; and quantitative analysis, including gravimetric analysis, acid/base and redox titrations, potentiometric, optical, and electrochemical procedures. Instrumental analytical methods are also explored in this program. Students are presented with an introduction to statistical treatment of data, its evaluation and reliability. This course is ideal for those students who desire to continue studying science, medicine, or wish to acquire additional preparation for the Advanced Placement examination.

Magnet Physics

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Pre-Calculus completion or concurrent

This yearlong course builds on the knowledge and skills developed in freshman Science and Technology and is an excellent preparatory for AP study and college science. Equal importance is given to qualitative understanding and mathematical rigor and emphasis is given to the historical development and future contexts of the discipline of physics. Cross-curricular synthesis, scientific reasoning, and critical thinking are explicitly developed in the course. Topics include kinematics, dynamics, oscillatory motion, gravitation, electricity and magnetism, thermodynamics, properties of matter, optics, and an introduction to modern physics. The course features a diversity of lab work from mechanical hands-on experience to sophisticated computer driven activities.

AP Physics C

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Magnet Physics. Calculus completion or concurrent

This college level calculus-based physics class prepares students for the C-level Advanced Placement Exam in physics. Topics in the first semester study of mechanics include Newton's Laws, conservation of energy and linear and angular momentum, simple harmonic motion, and gravitation. Topics in the second semester study of electricity and magnetism include electrostatics, Gauss' Law, Ampere's Law, magnetic induction, electric circuits, and Maxwell's Equations. The combination of this course and Calculus B-C is an excellent preparation for college study in the physical sciences and engineering.

Modern Physics

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Magnet Physics

This second course in physics is designed to provide students with an overview of developments in physics since approximately 1900. Beginning with the outstanding problems in the field in the late 19th century the student studies the foundations and consequences of the revolutions in relativity and quantum mechanics. Topics include cosmology, the big bang, black holes, elementary particles, unified field theory, the standard model, solid state, and nanotechnology. Topics to be studied vary with input from the students. A survey of the literature and student research is an integral part of the course.

Planet Earth

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Biology

Planet Earth is a registered innovative course through the Texas Education Agency and not offered anywhere else in the district. The course content focuses on the complex, dynamic relationship between the planet and its

life, tracing it through the Earth's geologic history. This emerging, integrative science is being referred to as Geobiology at the college level. The course is project-based with major components being a semester-long biodiversity study, a simulated senate hearing to evaluate extra-terrestrial impact defense, and geologic mapping exercises, through which students experience hands-on geologic and biologic field work. In fact, it is one of only two courses in the district which is being observed by the University of Texas Project-based Instruction class (the other course being LASA's own Science and Technology). This interdisciplinary course relies on reading and discussion of primary source material rather than a textbook, and writing and public speaking skills are enhanced through essay-writing and student presentations. The semester-long biodiversity study is a chance to complete authentic scientific research - here is your chance to do *real* science!

Environmental Philosophy and Policy

Grade Placement: 11-12

Credit: 0.5

Prerequisite: Magnet Physics

Science is a social issue, and the examination of environmental issues offers an excellent opportunity to synthesize technical data coupled with social, political, economic, ethical and philosophical information. We are confronted in the media, in our community, and in our personal life with problems that deal with environmental issues. The purpose of this course is to introduce you to a number of contemporary topics so that you will: Be a more intelligent consumer of scientific information; practice thinking skills that will enable you to analyze, evaluate, and make decisions concerning complex contemporary issues in science; improve your communication skills, both written and oral, in order to enhance your effectiveness in expressing your view on the issues; become more tolerant of ambiguity and diversity as it pertains to human experience and increase your ability to weigh multiple points of view.

Students will analyze and evaluate readings from our text, Taking Sides: Clashing Views on Environmental Issues, which offers evidence for two differing viewpoints on that issue. Case studies (mostly local) will be used to offer the opportunity to apply the philosophy to policy in a practical and real way. Students will also analyze Silent Spring by Rachel Carson, as it is the classic that effectively spawned the modern environmental movement. Students will learn how to analyze and evaluate arguments through discussion of these readings, eventually practicing writing arguments through their semester project papers.

Science Olympiad

Grade Placement: 11-12

Credit: 1.0

Prerequisite:

This course is designed primarily for juniors and seniors interested in learning the material covered in Science Olympiad in depth. During the class, students will create information binders, read texts, generate practice tests, work with experts from UT and industry, take practice tests, compete at tournaments, and conduct research in four to six

of the twenty three Science Olympiad topics. The topics come from the disciplines of earth science, physical science, life science, engineering, math, and scientific inquiry. Topics will be assigned based on student interest, with the caveat that each student will be assigned one an engineering topic. This class is designed for students interested in competing in Science Olympiad tournaments and enrollment requires teacher approval.

AP Environmental Science

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Magnet Physics

What is all the fuss about Ozone Action Days? How did human alteration of the landscape contribute to the destruction wrought by Hurricane Katrina? What did the environment of the Austin area look like before there was a city and what changes accompanied settlement of the area?

These are the kinds of questions investigated in Advanced Placement Environmental Science (APES). "The APES course is designed to be the equivalent of a semester, introductory college course in environmental science. The goal of the APES course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternatives for resolving or preventing them" (from the College Board course description). While the class prepares students to pass the AP test, field and laboratory work are emphasized. A preserve three blocks from the school is the scene for much of the field work. One class project involves multiple field trips to rescue native plants from soon-to-be-developed sites and transplanting them in the preserve to restore the original tallgrass prairie that once covered the area. Other field trips focus on soil biology, water quality testing, electricity from landfill gas, fertilizer from sewage, green building techniques, and bird migration. In addition to a college textbook, Jared Diamond's Collapse (the sequel to Guns, Germs and Steel) is provided to APES students.

Magnet Aquatic Science

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Biology and Chemistry

Aquatic Science is a study of marine ecology with a focus on near coastal systems including estuaries, saltwater marshes, mangrove swamps, barrier islands, bay communities and coral reefs, along with open ocean communities such as hydrothermal vents and migratory populations of sharks, whales and dolphins. Throughout the school year students investigate the physical and chemical effects of currents, climate, storms and human interaction with these ecosystems and populations. Coastal trips and individual student research projects (of the student's choice) are an integral part of this course.

AP Physics B

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Concurrent enrollment or completion of Precalculus

This course provides a systematic introduction to the main principles of physics and emphasizes the development of conceptual understanding and problem-solving ability using algebra and trigonometry, but rarely calculus. In most colleges, this is a one-year terminal course including a laboratory component and is not the usual preparation for more advanced physics and engineering courses. However, the B course provides a foundation in physics for students in the life sciences, premedicine, and some applied sciences, as well as other fields not directly related to science.

Social Studies

The Freshman Core:

World Geography (4513.H000)

Grade Placement: 9

Credit: 1.0

Prerequisite: None

The purpose of this course is to provide students with a global understanding of the world. Although we will spend time with physical geography, the main focus will be on human/cultural geography. The units we will cover include physical geography, population, disease, resources, economics, culture, religion, and international conflicts. In order to place topics into a contemporary context and to ensure that students have a working knowledge of place and location, the course will draw heavily from current events. These events will also serve as a vehicle for teaching human geography concepts such as political change, border/land disputes, the development and diffusion of religions, and technology and customs. Students will also gain an understanding of international organizations such as the United Nations, the European Union, the World Bank, and NATO. Students will participate in Socratic Seminars/discussions in which they will be asked to think critically about world issues and to engage in dialogue with their peers. Students will also be expected to create high quality projects and presentations, both individually and in groups, with a variety of media.

The Sophomore Core:

World History (4623.H000)

Grade Placement: 9

Credit: 1.0

Prerequisite: World Geography

The purpose of this course is to provide students with a clear and personal understanding of the human past. Using primary sources as our main text, students are encouraged to think somewhat independently of chronology as they are introduced to the struggle between historical truth and historical interpretation, and to compare their own concept of history to those of major historians. Recurring themes, such as gender roles, the concept and organization of power, and cultural and social adaptation will be studied in terms of historical theory and as evolving features of human society.

With an emphasis on historical research and inquiry as opposed to simply content, the class will focus on understanding the significance of historical events within their contemporary contexts, and analyzing the ramifications of those events for future generations.

The Junior Core:

AP U.S. History (4733.P000)

Grade Placement: 11

Credit: 1.0

Prerequisite:

A college-level survey in United States History, this course culminates with the AP examination in May. In content, it covers the history of the United States from 1492 to the present, with special emphasis on topics and time periods relevant to the AP exam. In addition to substantial readings from the adopted text, this course will involve extensive outside reading from both primary and secondary sources, analysis of documents and essay writing, and special emphasis is placed on topics such as political theory, historiography and historical research methods. In addition, students will complete several projects, based on investigations of specific historic events, throughout the year. Strong emphasis will be placed on the writing and critical thinking skills essential to success on the AP examination.

The Senior Core (*semester long courses*):

AP Government (4841.P000)

Grade Placement: 11-12

Credit: 0.5

Prerequisite: US History

This is a rigorous, college-level course; instruction is aligned with the College Board curriculum's thematic approach. As such, students are given instruction in areas such as: Foundations of the Constitution, The Rise of the All-Powerful Supreme Court, Domination by Congress, Imperial Presidents, Political Parties and Voter Demographics, Voting, and Money, Media, and Elections.

Through direct instruction, supplemental readings of current events, relevant videos and media clips, and class discussion, students explore these areas in the context of both history and the present. Because real-world experience is enlightening, students are often required to work on campaigns or interview lobbyists/representatives. Also, guest speakers, such as local U.S. Representatives, are enlisted when available. The ultimate goal of this course is not passing the AP, but rather crafting a citizen upon which the United States can depend on to lead us into the future.

AP Microeconomics (4946.P000)

Grade Placement: 11-12

Credit: 0.5

Prerequisite: U.S. History or co-enrollment in U.S. History

In this course, students will acquire an understanding of fundamental concepts of microeconomic theory by

examining basic economic concepts; nature and functions of product markets; factor markets; and efficiency, equity and the role of the government. Student will understand and analyze the decisions made by individuals and businesses within the current national and global economic system.

Large part of the course will be dedicated to generating and analyzing microeconomic graphs for the following concepts: Production Possibilities Frontier, Individual Market Supply/Demand Curves, Derived Consumer Demand/Elasticity of Demand, Indifference Curves, Short-Run/Long Run Production Cost Relationships, Short Run/Long Run Profit Maximization/Cost Minimization Models for four basic market structures, Derived Factor Demand, Labor Markets, Externalities, Income Distribution/Lorenz Curve.

Electives:

AP European History (4635.P000)

Grade Placement: 11-12

Credit: 1.0

Prerequisite: World History

AP European History will build on the foundation set in World History, using that course as a springboard to study the people and events of European History in more depth. The year-long curriculum weaves primary sources, including literature contemporary to the period of study, and historical studies and interpretations by leading scholars. Students will have the opportunity to foreground and compare these texts as they approach them from different historical perspectives. In addition, students' communication skills, both written and verbal, will be developed through a variety of activities including response writing, debate and discussion, and hands-on projects that tie historical study to the historical imagination of each student.

AP Psychology (4938.P000)

Grade Placement: 11-12

Credit: 0.5

Prerequisite:

The semester-long AP Psychology course is meant to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.

Some of the topics discussed in class include: How we learn—and How We Could Do It Better; (why there are) Different Perceptions of Our World; Biology of the Brain; Our Existence in Altered States of Consciousness; Drug and non-drug treatments of Psychological Disorders; and Why Your Personality is Different from Everyone Else's.

Constitutional Law (4932.H000)

Grade Placement: 11-12

Credit: 0.5

Prerequisite:

This semester-long class will discuss landmark U.S. Supreme Court decisions to learn about the concept of liberty (from freedom of religion to abortion), equality (affirmative action to gay rights), search and seizure, gun rights, cruel and

unusual punishments, etc. This course is informative and allows for discussion of controversial topics.

This course also provides students the opportunity to learn about the operation and inner workings of arguably America's most powerful branch of government—the Supreme Court. Analysis will include not only the struggle between state and federal power, but also the degree to which the government can restrict individual freedom.

Contemporary Issues (4932.H100)

Grade Placement: 11-12

Credit: 0.5

Prerequisite:

This semester-long course will examine the history of the United States from 1945 to the present with a focus on how historical events have created the current political, cultural, and social climate in which we live. There will be a strong emphasis on exploring current events, specifically through understanding their historical causes and predicting their effects. Using a variety of sources including primary and secondary sources, we will examine the changing faces of American society, and foreign and domestic policy.

Debate I (1537.R000)

Grade Placement: 9-12

Credit: 1.0

Prerequisite:

Students in the semester-long Debate course examine the historical and contemporary role of debate in the democratic process. They apply standards to analyze and evaluate propositions and construct valid approaches to both affirmative and negative arguments. Students will use effective extemporaneous speaking skills and provide valid and constructive critiques of others. In advanced classes, students will be required to complete long-term teacher-directed projects. Many students also participate in competitions. **This course does not provide Communication Applications (Speech) credit.**

Also offered: **Debate II (1538.R000)**

Prerequisite: Debate I

Debate III (1539.H000)

Prerequisite: Debate II

Facing History (4932.H200)

Grade Placement: 11-12

Credit: 0.5

Prerequisite:

"All that is necessary for the forces of evil to win in the world is for enough good men to do nothing." – Edmund Burke

This semester-long course is not only about racism or anti-Semitism; it is not only about the Holocaust. However, we will address those issues to learn more about ourselves as individuals and as members of society—only then can we begin to make decisions about race, tolerance, conformity, and obedience. This class will not end prejudice, discrimination, or hatred, but perhaps it will heighten our awareness of the cause of and consequences of those issues. This course covers

areas of American and World History involving human rights issues and abuses including but not limited to slavery in America, the Armenian genocide, sex slavery today, the War on Terror, and the Holocaust.

Mock Trial

Grade Placement: 9-12

Credit: 0.5

Prerequisite:

The state of Texas has recognized that successful participation in business, professional and social settings requires effective communication skills. As such, it requires students to take a 'Communications Applications' course that includes oral presentations and instruction on the communication process, interpersonal communication, and group communication. Within its advanced academic program, the Liberal Arts & Science Academy (LASA) seeks to satisfy such core graduation requirements while also providing an enhanced educational environment. To that end, LASA has developed a Mock Trial class where students can both learn and apply their communication skills.

Students enrolled in the Mock Trial class will identify, analyze, develop, and evaluate communication skills needed for professional and social success within a litigation framework. They will build skills necessary for interpersonal situations (working with clients & opposing counsel), group interactions (jury selection), and personal and professional presentations (legal seminars & jury trials). Furthermore, students will be transformed into advocates as they participate in mock trials. In this context, they will use their problem solving processes and critical-thinking skills to develop a coherent trial strategy. Within the trial courtroom, advocates will deliver clear verbal messages, be attuned to effective nonverbal behaviors, and most importantly, listen for desired results.

LASA understands that its gifted children must, like all other Texas high-schoolers, comply with core graduation requirements. Through innovative curriculum such as Mock Trial, LASA hopes to allow its students to learn, thrive within a real-world context, and also have fun.

Model United Nations I

Grade Placement: 10-12

Credit: 1.0

Prerequisite:

This year-long course will have a multifaceted approach that allows students to develop knowledge and skills for participating in Model United Nations simulations that require extensive knowledge of contemporary global issues. While developing an understanding of the political, economic, and social situations of an array of different countries/regions of the world is an important part of the course, students will actively role-play persons of ambassadorial stature and use rhetorical skills to expound their researched perspective of a topic to both small and large audiences. Students will research the history and current status of the United Nations, the historical and contemporary backgrounds of countries, the topics chosen for either formal multi-school conferences or informal in-class simulations, and the rules of parliamentary procedure. They will also develop speech-writing skills and practice public speaking

both formally and informally. Students will draft position papers on given topics, practice writing draft resolutions, caucus and use skills of diplomacy at both conferences and in an informal classroom setting. Students will engage primarily in analytical, long-term projects, while daily developing a theoretical framework for understanding international relations. **Students who enroll in this course will be required to attend two Model UN conferences; one in the fall and one in the spring. There are fees associated with this course (see instructor for details).**

Model United Nations II

Grade Placement: 11-12

Credit: 1.0

Prerequisite: Model United Nations I

The Model United Nations II class will allow for continued growth in becoming global-minded citizens and leaders. By the end of the course students will be more equipped with the skills necessary to tackle the world's problems concerning peace and security, energy and our environment, global health and poverty, and development and human rights. During class time, students will prepare for conferences, work on the designing and implementation of the Model UN conference hosted by LASA in May, and read a current book discussing globalization and the international system. **To facilitate this, each member of the class must participate as a delegate in at least one out of school conference each semester. During the fall semester, all students must attend the MUNSA conference. During the spring semester, all Model UN II students must be on the LASA conference staff in addition to attending a conference as a delegate.** As a member of the class, conference preparation, text reading and discussion, and active participation in classroom debate will determine your grade. Model UN II students will read a book by Joseph Stiglitz, *Making Globalization Work*. Each book will be distributed in class. **There are fees associated with this course (see instructor for details).**

Radio Communications (4932.M400)

Grade Placement: 9-12

Credit: 0.5

Prerequisite:

This semester-long course is built around a framework that includes the use of Amateur Radio as a means to education students for life and work in a global, technological society. By the end of the course, each student will obtain their Federal License to operate on Amateur Radio frequencies to talk to people all over the world.

In practicing good radio communication, one is forced to apply basic electronics, build necessary devices (antennas, tuners, receivers, etc.), learn geography, and practice foreign languages. Concepts will be covered and then put into practice by using them to operate from the LBJ High School Amateur Radio Club's 'Radio Room.'" K5LBJ students will also learn both Voice and Morse Code, and communicate in digital codes such as

PSK31 (similar to instant-messaging) and Slow-Scan TV (transferring images). Exploration of satellite operation is also anticipated.

Sociology

Grade Placement: 10-12 **Credit: 0.5**

Prerequisite:

Sociology students study social organizations, institutions, and patterns of social relationships in different cultures. They also analyze the social interactions of individuals and groups. Sociology students learn a systematic method for studying cultures, social institutions, social relationships, and the process of socialization. They also study a variety of social issues such as crime, racial discrimination, gender equity, urbanization, family structure, and other similar topics.

Campaigns & Elections (*offered alternating years*)

Grade Placement: 10-12 **Credit: 0.5**

Prerequisite:

Don't like the way government is run? Dissatisfied with the recent election outcomes? Join the Campaign & Elections class to start the process of political change....

This semester-long elective allows students to study the art and artifice of modern political campaigns. Through study of the successes and failures of historic and recent campaigns for U.S. President, students will learn and debate the American definitions of "liberal" and "conservative"; learn how the media influences our perceptions and how politicians influence the media; understand how polling data is collected and used on the campaign trail; discover who is voting in America, and what can be done to increase voter turnout. The class will culminate in an in-class election in which students create their own advertising (TV, radio, print, web site), conduct political fundraising, track opinion and results polls, give (or write!) political speeches, and participate in all the other elements of a real, modern political campaign.

AP Comparative Government and Politics

Grade Placement: 12 **Credit: 0.5**

Prerequisite: AP U.S. History

AP Comparative Government and Politics is an elective course that provides a college-level introduction to the fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course content is presented in depth and at an accelerated pace. The course aims to illustrate the rich diversity of political life and to show available institutional alternatives in addition to stressing the importance of global political and economic changes. Students will compare and contrast major political concepts, themes, and generalizations related to six core countries studies in college-level introductory comparative political courses: China, Great Britain, Iran, Mexico, Nigeria, and Russia. Students will read college-level texts, analyze documents, and conduct formal research and writing projects. AP students prepare to take the Advanced Placement examination in May for possible college credit.

Non Magnet Courses

Other course descriptions that are not listed as magnet courses but that are offered at the Liberal Arts and Science Academy High School (e.g., speech, physical education, band, orchestra, choir, theater, etc.) will be found within the Austin Independent School District Secondary School Information Guide which can be downloaded at http://www.austinisd.org/academics/curriculum/school_guide/index.phtml