

JICHS Course Description Booklet

2014-2015



James Irwin Charter High School exists to guide students in the development of their character and academic potential through academically rigorous, content-rich educational programs.

5525 Astrozon Boulevard
Colorado Springs, CO 80916
Office: (719) 302-9000
Fax: (719) 576-8071
www.jamesirwin.org

Administration and Counseling

Principal	Alex Marquez
Assistant Principal	Daesha Willingham
Dean of Students	Rob Wagner
College Counselor	Nancy Williams
Director of Admissions and Academic Advising	Janice Cook

Table of Contents

Administration and Counseling	2
Table of Contents	2
James Irwin Charter High School’s Mission	3
Graduation Requirements	3
Valedictorian Determination	3
Course Sequence Map	4
Honors and Advanced Placement (AP) Offerings	5
English	5
World Languages	9
French	9
Spanish	10
Latin	12
History/Geography	12
Mathematics	15
Science	18
Physical Education	221
Electives	222
Technology Education	222
Fine Arts	243
Art	243
Drama	266
Music	276
Character Enrichment	287

James Irwin Charter High School's Mission

James Irwin Charter High School exists to guide students in the development of their character and academic potential through academically rigorous, content rich educational programs.

Graduation Requirements

To graduate from JICHHS, a student must have completed **all** Character Program Curricula and earned 48 credits by fulfilling the following course requirements:

English	8 credits
Speech and Language Development	1 credit
World Language.....	6 credits
History/Geography	8 credits
Math	8 credits
Science.....	6 credits
Art.....	1 credit
Music	1 credit
P.E.	2 credits
Character and Ethics.....	1 credit
Electives.....	6 credits

Valedictorian Determination

In determining the Valedictorian and Salutatorian from each senior class, the selection will be made based on which students have achieved at the very highest level. To be Valedictorian, a student must have the highest weighted grade ranking in the senior class.

Course Sequence Map

	English	History/ Geography	Science	Math ¹	World Languages ²	Electives ³
Grade 9	English 9	World History I	Biology	Algebra I	Spanish I or French I	Char. /Speech & LD
Grade 10	English 10	World History II	Chemistry	Geometry	Spanish II or French II	P.E./Art
Grade 11	American Literature	American History	Physics	Algebra II	Spanish III or French III	Music/ P.E.
Grade 12	British and World Literature	Government/ Economics	Science Elective/ Elective	4 th Math	F.L. Elective/ Elective	Electives/ Electives

JICHS MATH SEQUENCE

9 TH GRADE	10 TH GRADE	11 TH GRADE	12 TH GRADE
ALGEBRA 2	TRIG. HONORS	AP CALCULUS AB	AP CALCULUS BC
GEOMETRY	ALGEBRA 2	TRIG. HONORS	AP CALC OR AP STATISTICS
ALGEBRA 1	GEOMETRY AND ALGEBRA 2	TRIG. HONORS	AP CALCULUS
ALGEBRA 1	GEOMETRY	ALGEBRA 2	ADV. MATH 1 OR TRIG HONORS OR AP STATISTICS
ALGEBRA 1	GEOMETRY	INTERM. ALGEBRA	ALGEBRA 2
MATH COURSE 3 (Elective credit)	ALGEBRA 1	INTERM. ALG. AND GEOMETRY	ALGEBRA 2

All classes offered at JICHS are at or above grade level.

Students will graduate with a minimum of 48 credits as they are required to take 6 classes each semester.

PLEASE NOTE THAT ALL CLASS DESCRIPTIONS ARE SUBJECT TO CHANGE AND THAT NOT ALL COURSES ARE OFFERED EVERY YEAR.

¹ Some students may be ahead or behind the standard math track. Students behind in math will also be behind in the high school science sequence. A minimum of four years of high school level math must be completed, beginning with Algebra I or higher, during grades 9-12.

² Three successive years of the same world language must be taken for graduation.

³ One semester of Art, one semester of Music, two semesters of P.E. and 6 electives credits are required for graduation.

Honors and Advanced Placement (AP) Offerings

Honors (H) or Advanced Placement (AP) designation for a high school level course title indicates a more challenging course which may be substituted for a regular course.

AP courses are taught at the college level and students are encouraged to purchase textbooks. **Students must take the AP exam given by the College Board in the spring.**

Depending on the score achieved and the college or university, students may receive college credit. The AP Exam fee will be \$86. Financial assistance is available for students qualifying for free or reduced lunch.

College credit **may** be earned for the following courses taught by JICHS faculty: AP Biology, AP Calculus AB, AP Calculus BC, AP Chemistry, AP Environmental Science, AP Computer Science A, AP English Language, AP English Literature, AP American History, AP Macroeconomics, AP Statistics, AP Physics 1, AP Physics 2, and AP Studio Art.

English

This English curriculum will guide students in the mastery of critical reading and writing skills according to the Colorado Model Content Standards. Writing will be based on MLA – Modern Language Association – style citation and Step-up to Writing/Six Trait Methods. The writing goals for the English curriculum include: organization, style, vocabulary, sentence structure, and conventions. Students read a minimum of four novels and one play a year.

English 9

2 semesters, 2 credits, required

Prerequisites: Successful completion of 8th grade English exit exam, 8th grade English

This course will introduce students to various literary selections that will enable them to study the elements of the short story, poetry, drama, novels and non-fiction. They will also demonstrate comprehension of biblical allusions within literature. Students will learn outlining for writing, research, and speech presentation. Writing will include the development and skill in narrative, descriptive, and expository essays. Students will learn vocabulary through standardized test practice. Grammar will review parts of speech, phrases, clauses, mechanics and usage. Throughout the year the students will be efficient in applying this knowledge to five paragraph essay writing assignments. Students will also conduct research for a 3-5 paper with sources.

Required Texts: *Adventures in Reading; Vocabulary Workshop: Level D: Grammar for Writing*

Suggested Novels: *Lord of the Flies, Much Ado About Nothing, The Chosen, To Kill a Mockingbird, Fahrenheit 451, Romeo and Juliet, The Odyssey, April Morning, Old Man and the Sea, and Dr. Jekyll and Mr. Hyde.*

Honors English 9

2 semesters, 2 credits

Prerequisites: Successful completion of 8th grade English exit exam, A/B in 8th English

Honor students should expect to engage in a more intense academic and intellectual approach to both literature and writing. The workload for this honor level class will be more stringent. Students will learn to analyze elements of various literature genres. Their writing skills will be expected to have good sentence structure, proper spelling, clear organization, and in-depth thought. They will also master and implement literary criticism techniques. At the end of the year the students will be writing a 5-8 page research paper based on critical analysis of a literary work.

Required Texts: *Elements of Literature; Vocabulary Workshop: Level D, Grammar for Writing*

Suggested Novels: *A Separate Peace, To Kill a Mockingbird, The Chosen, Fahrenheit 451, Lord of the Flies, Much Ado About Nothing, Silas Marner, Cold Sassy Tree, Picture of Dorian Gray, Night, Romeo and Juliet*

English 10

2 semesters, 2 credits, required

Prerequisites: Successful completion of English 9

This course will build on the previous year study delving into the genres of the novel, poetry, drama, and non-fiction. Student writing will include the various writing types: narrative, descriptive, and expository. Persuasive writing will be introduced and used in the development of writing and public speaking. The students will be required to write well-organized five paragraph essays. By the end of the year the students will be expected to write a well-developed research paper of five to eight pages.

Required Texts: *Adventures in Appreciation; Vocabulary Workshop: Level E; Grammar for Writing*

Suggested Novels: *The Adventures of Huckleberry Finn, The Great Gatsby, The Red Badge of Courage, Brave New World, Picture of Dorian Gray, The Pearl, Tale of Two Cities, Emma, and Peace Like a River.*

Honors English 10

2 semesters, 2 credits

Prerequisites: Successful completion of Freshman Honors English or teacher recommendation

This course builds on the skills of the previous year and expands student knowledge in writing and literature. Students will therefore learn to refine their acquired knowledge. The expectations set for these students will be greater, and students will be expected to handle the requirements set for the successful completion of this course. Students will continue using literary criticism to analyze various genres of literature. At the end of the year these students will be expected to handle a 6-8 page research paper based on critical analysis.

Required Texts: *Elements of Literature; Vocabulary Workshop: Level E: Grammar for Writing*

Suggested Novels: *A River Runs Through It, The Adventures of Huckleberry Finn, The Great Gatsby, Frankenstein, Brave New World, The Red Badge of Courage, Emma, and Tale of Two Cities.*

American Literature

English 11, 2 semesters, 2 credits, required

Prerequisites: Successful completion of English 10

This is a survey course in American Literature that will take a dual approach: the first will be the traditional Euro-colonial approach that includes the literature of the Colonies and the Revolution; it will also concentrate of the developing "Eastern" domination of literature in the late 19th century. Many of the standard writers of these periods will be read. The second approach will involve the discovery of the American West and the transition from a British and European conception of writing in America to a "Western" ethos or view of Americans and *their* literature. It is desired that such a comparison will produce for the students a balanced view of American literary thinking. This East-West approach to the course will be facilitated by a series of short introductory lectures on literary history supplemented by the appropriate readings.

Students will learn speech rubrics and learn to apply this skill. Writing will include the review of writing types learned and will be expanded to include cause-effect and compare-contrast. Students will learn to apply writing to their study of literature, analyzing and comparing the various works. At the end of the year students will be expected to write an 8-10 page research paper based on a critical analysis of a literary work.

Required Texts: *Adventures in American Literature; Vocabulary Workshop: Level F; Grammar for Writing*

Suggested Novels: *The Scarlet Letter, Ethan Frome, Farewell to Arms, The Crucible, Their Eyes Were Watching God, Grapes of Wrath, Age of Innocence, A River Runs Through It, and Uncle Tom's Cabin.*

AP Language and Composition

English 11, 2 semesters, 2 credits

Prerequisites: Recommendation of faculty, completion of Honors English 10

It is a course emphasizing the development of skills in critical reading of imaginative and discursive non-fiction and in writing about related ideas. It is for students capable of doing college-level work in English while they are in secondary school, and who are willing to devote the energy necessary to complete a course more rigorous and demanding than other high school English courses designed for college-bound students. To that end, students will read widely from such topics as autobiographies and diarists; biographers and history writers; critics; essayists; journalists; political writers; and science and nature writers. The ostensible goal is to enable students to demonstrate their achievement in college-level work by taking the AP English Examination in composition, administered by the College Board in May of each school year. The AP exam allows 60 minutes to answer the multiple-choice questions and 135 minutes to respond to three essay questions (one of which is a synthesis question with 4-7 sources). The essay counts for 60% of the total grade on the examination; the multiple-choice section 40%. Students will also write a 10-12 page research paper and several polished essays throughout the year including Narration, Observation, Explanatory, Evaluation, and Problem/Solution papers.

Required Text: Advanced Placement Language and Composition: A Rhetoric. Compiled and edited by M.K. Will, 2002, *Vocabulary Workshop Level F and G; 1984, Everything's An Argument, 50 Essays, Three Cups of Tea, Nickel and Dime, and Writing the AP Synthesis Question.*

British and World Literature

English 12, 2 semesters, 2 credits, required

Prerequisites: Successful completion of English 11

This is a general introduction to the major ideas, themes, and writers of British and Classical Western Literature. Semester one may include such authors as Chaucer, Spenser, Shakespeare, Donne, Johnson, Milton, Dryden, Pope, Swift, Wordsworth, Keats, Tennyson, Browning, and others, as well as novels by Charles Dickens and Charlotte Bronte. Second semester will include readings from the late 19th century to the 20th century and may include such authors as Woolf, Shaw, Eliot, Auden, Thomas, Orwell, Joyce, Lawrence, and many others. Writing for seniors will include the application of previously learned skills. These will be applied to the analysis and interpretation of British literary work. At the end of the year students will have written a 10 page research paper on the critical analysis of one of the literary works studied.

Required Texts: *Adventures in English Literature; Vocabulary Workshop Level G; Warner's Grammar*

Suggested Novels: *Sense and Sensibility, Gulliver's Travels, Paradise Lost, Crime and Punishment, Jane Eyre, 1984, Hamlet, Macbeth, Great Expectations, and Cry Beloved Country.*

AP Literature and Composition

2 semesters, 2 credits

Prerequisites: Recommendation of faculty, completion of AP Language and Composition

It is a course emphasizing the development of skills in critical reading of imaginative fiction in the Western literary tradition and in writing about related ideas. It is for students capable of doing college-level work in English while they are in secondary school, who are willing to devote the energy necessary to complete a course more rigorous and demanding than other high school English courses designed for college-bound students. This AP course in literature does not exclude works in translation, but whenever possible

emphasizes writing by the masters in Western literature. The ostensible goal is to enable students to demonstrate their achievement in college-level work by taking the AP English Examination in literature, administered by the College Board in May of each school year. The AP exam requires students to spend from 60 minutes answering multiple-choice questions and 120 minutes responding to essay questions. The essay counts for 60% of the total grade on the examination; the multiple-choice section, 40%. Students will write poetry, short story, and novel research papers finishing the year with a 10 page paper using literary theory. The more important long-term goals of this course are to enable students to learn at a rate commensurate with their ability; to deal with material that intellectually mature students find engaging; to refine reading and writing skills important for success, not only in college but also in the business and professional world; AND to cultivate habits of reading, writing, and thinking that characterize life-long learning and enjoyment.

Required Texts: *The Norton Introduction to Literature, Vocabulary Workshop Level H.*

Suggested Novels: *Ethan Frome, Age of Innocence, Crime and Punishment, Brideshead Revisited, Scarlet Letter, Their Eyes Were Watching God, Jane Eyre, Great Expectations, The Importance of Being Ernest, Hamlet, Macbeth, A Streetcar Named Desire, A Farewell to Arms, A River Runs Through It, Winter Wheat, Sense and Sensibility, Resurrection.*

Creative Writing

1 semester, 1 credit, Elective

Prerequisites: none

A writer strives to entertain the reader by painting a picture with words that will cause the reader to meditate on truth or beauty. Students will experiment with poetry, short stories, drama, and non-fiction writing exercises. Each genre requires different techniques to create an effect on the reader. Delving deeper into grammar and how to manipulate it for effect will also enhance students' repertoire of skills in creative writing. Visits from writers and close examination of exemplary writing will further help students not only write better by emulating these pieces, but also recognize worthy pieces of literature. The class may include an extensive creative writing project as well as a research project on a writer.

Speech and Language Development

1 semester, 1 credit, required

Prerequisites: none

Students will study eight areas in the Speech course including the proper way to listen, organize and outline a speech, and interpret the following: poetry, oral, drama, comedy, and storytelling. Also, students will study the art of extemporaneous speaking, impromptu speaking, which leads to debate and original oratory. To finish the semester, students will study parliamentary procedure. After the semester of speech the students will be comfortable in front of a class accomplishing the eight disciplines listed above. This class is also intended to improve and develop the vocabulary of the student. Several Latin and Greek roots are introduced each week along with several words that come from each of those roots. Besides learning the vocabulary words in the lesson, the student uses his/her knowledge of the roots to delineate the meanings of words that they have never seen before.

Required Text: *Speech for Effective Communication; Vocabulary from Classical Roots*

World Languages

Knowledge of at least one world language and its culture greatly expands students' appreciation and understanding of the world in which we live. This knowledge also helps the students appreciate the English language and the American culture. Studying a world language enhances the development of vocabulary, spelling, reading, and comprehension of oral and written expression in the students' own language is also essential in a world in which international trade and travel are a reality. The requirement of three years of the same world language will allow the student to achieve proficiency in the chosen language. Proficiency in one language increases the ease with which other languages may be learned. Many colleges require world language for admission. Three successive years of the same world language must be taken for graduation.

French

French is the language of diplomacy and is one of the official languages of Canada, Europe, Asia and Africa. Students considering a career in government, the arts, science or business may want to study French.

French I

2 semesters, 2 credits

Prerequisites: none

This course is an introduction to the French language and culture. A technique, known as Total Physical Response Storytelling (TPRS), is used to help students acquire a large vocabulary of practical words, expressions, and common verbs. This methodology teaches the language through acting, gesturing, and storytelling to introduce new vocabulary and to place it in a comprehensible context for the students. Students learn the language in a meaningful, comprehensible way, rather than by simply memorizing definitions. French I students will have acquired enough vocabulary to be able to hold basic conversations, comprehend and write stories, write journals weekly, and comprehend introductory readers by second semester. Students will be focusing on developing a practical vocabulary base and acquiring many verbs in the present tense. Students will be reading at least one French reader in class this year. Cultural projects will also be completed each quarter. Projects consist of a variety of research papers, creative projects and presentations focused on French speaking cultures and societies.

Required Texts: *Discovering French I*

French II

2 semesters, 2 credits

Prerequisites: Grade of C or above in French I

This course is the continuation of French I. Total Physical Response Storytelling (TPRS), is used to help students continue to expand their vocabulary of practical words, expressions, and common verbs. This methodology teaches the language through acting, gesturing and storytelling to introduce new vocabulary and to place it in a comprehensible context for the students. Students learn the language in a meaningful, comprehensible way, rather than by simply memorizing definitions. French II students will focus on expanding their vocabulary and learning new verbs in both the present and past tenses. The majority of the class hour will be conducted in French. Students will be able to hold more complicated conversations, comprehend and write stories, write journals weekly, and comprehend readers. Students will be focusing on mastering the basic vocabulary and grammar rules presented in French I and learning new vocabulary and verb tenses. Students will be reading a minimum of two French readers in class this year.

Cultural projects will also be completed each quarter. Projects consist of a variety of research papers, creative projects and presentations focused on French speaking cultures and societies.

Required Texts: *Discovering French 2*

French III

2 semesters, 2 credits

Prerequisites: Grade of C or above in French II or Teacher Recommendation

This course is the continuation of French II. A combination of both Total Physical Response Storytelling (TPRS), and grammar rule instruction is used to help students continue to expand their vocabulary of practical words, expressions, and verbs. TPRS teaches the language through acting, gesturing and storytelling to introduce new vocabulary and to place it in a comprehensible context for the students. Students learn the language in a meaningful, comprehensible way, rather than by simply memorizing definitions. French III students will focus on expanding their vocabulary and learning new verbs in both the present and past tenses. The class hour will be conducted entirely in French. Students will be able to hold more complicated conversations as well as debate, comprehend and write stories, write journals weekly and comprehend readers. Students will be focusing on mastering the vocabulary and grammar rules presented in previous French classes as well as learning new vocabulary and the subjunctive verb tense. Students will be reading a minimum of two advanced French readers in class this year. In addition, students will be doing presentations entirely in French throughout the year, and having regular class discussions in French. Cultural projects will also be completed each quarter. Projects consist of a variety of research papers, creative projects and presentations focused on French speaking cultures and societies.

Required Texts: *Discovering French III*

French IV

2 semesters, 2 credits

Prerequisites: Grade of C or above in French III or Teacher Recommendation

This course is the continuation of French III. This is a diverse class that will focus on grammar rule instruction, film, literature, phonetics, French society, and culture. French IV students will use their vocabulary; improve their pronunciation, and learning more complex, sophisticated usages of the language. The class hour will be conducted entirely in French. Students will be able to hold more complicated conversations as well as debate, comprehend and write stories, write journals and comprehend readings. Students will master the vocabulary and grammar rules presented in previous French classes as well as learn new vocabulary. Students will read several French readers, view French films, and learn about French culture and society through an assortment of resources. In addition, students will conduct presentations entirely in French throughout the year. Students will be expected to keep up with French current events via the Internet, news reports and newspapers.

Required Texts: *Tresors du temps*

Spanish

The Spanish language is becoming more common as a means of communication throughout the U.S.A. Knowing Spanish is a valuable asset in any career due to our increased business with Latin America.

Spanish I

2 semesters, 2 credits

Prerequisites: none

This course provides an introduction to the Spanish language and Hispanic culture. Through the use of Total Physical Response (TPR) methodology designed by the Command Performance Language Institute, the student will learn conversational Spanish in a dynamic and interactive academic atmosphere. Emphasis also will be placed on enriching the student's vocabulary using 900 Spanish cognates

(words similar to English) in addition to learning Spanish words and phrases used in everyday life. Each student will maintain a graded class notebook containing a list of Spanish cognates, verbs, TPR/Vocabulary Quiz results and classroom notes.

Required Texts: *Navegando 1*

Spanish II

2 semesters, 2 credits

Prerequisites: Grade of C or above in Spanish I or Teacher Recommendation

The Spanish Basic II material will develop good comprehension in reading, writing, grammar, and speaking. The class will focus on increasing vocabulary and learning new verbs in present and past tenses. The students will comprehend and respond to oral directions and questions, and be able to communicate simple personal ideas using correct pronunciation and grammar. They will also be able to write short stories with clarity. The class uses the Total Physical Response Story Telling (TPRS) method of language instruction, which incorporates stories and actions. The lesson will include reading, listening to tapes, videos, and speaking. The students will also gain knowledge about Hispanic culture and customs.

Required Texts: *Navegando 2*

Spanish III

2 semesters, 2 credits

Prerequisites: Grade of C or above in Spanish II or Teacher Recommendation

These students will continue using TPR. (Total Physical Response Storytelling). It is used to help students acquire a large vocabulary of practical words, end expressions. This methodology teaches the language through acting, gesturing, and storytelling. Students therefore, learn the language in a meaningful, comprehensible way. Spanish III combines TPRS with grammar rule instruction where students will learn new verbs in the present, past and future. The class will be conducted entirely in Spanish. The expectations of these students are to be able to read, comprehend, and write the language in an intelligible fashion.

Required Texts: *Navegando 3*

Spanish IV

2 semesters, 2 credits

Prerequisites: Grade of C or above in Spanish III or Teacher Recommendation

This course builds on the skills learned in Spanish III. It will provide advanced students with the opportunity to continue improving Spanish-speaking skills in a dynamic, interactive environment. The students of Spanish IV will be expected to read, speak, and write with some degree of fluency, clearly using the correct grammar and writing skills. The course will also continue to develop for the students' cultural knowledge of Spanish speaking countries through current events using the media, computer, periodicals, and literature. Spanish will be the only language spoken in the class.

Required Text: *Encuentros Maravillosos*

Latin

Latin is the basis for all Romance languages (Spanish, Portuguese, French, Italian, and Romanian). The student of Latin has a lifetime edge in learning these languages and in understanding the English language. Latin students outscore other students on verbal standardized tests (ACT, SAT, etc.). The history and mythology of the Roman Empire make Latin come alive and form a foundation for understanding Western Culture. Students interested in medicine, law, history, or linguistics might choose to study Latin.

Latin I

2 semesters, 2 credits, Elective

Prerequisites: none

The study of Classics continues to be fundamental to the humanities and to a liberal education, since a solid foundation in the languages, history, and culture of Greco-Roman civilization provides a means of understanding the past and the intellectual roots of the present. Preservation and enhancement of our classical inheritance serves to support James Irwin Charter Schools' mission to help develop students' academic potential. The study of Latin is recognized as an excellent foundation for college preparation because it provides students with a greater ability to understand the foundations of the English language. This course will ensure that all aspiring students gain Level I proficiency in the Latin language, written and spoken, as well as an introduction to classical literature, culture, and history and of the influence of the Greco-Roman world on the concepts and values of Western civilization. Students taking this course may sit for the National Latin Exam in March.

Required Text: *Wheelock's Latin*

History/Geography

An understanding of history, geography and economics is fundamental to becoming a responsible citizen. Students must study world history, as well as the history and government of the United States, in order to understand and evaluate their place in the world. Similarly, current world events may be understood through the perspective of the past. History explores the politics, passions and philosophies, and economic situations that move men. Students of history are able to take advantage of the accumulated human experiences of the ages, thereby gaining insight and judgments regarding past, current and future human experiences. Courses are taught in a carefully planned sequence, building upon previous knowledge so students will gain greater understanding of recurring historical themes.

World History I

2 semesters, 2 credits, required

Prerequisites: Successful completion of 8th History

History is a reading/writing-based discipline. Accordingly, instructors teach and reinforce the principles of good writing and reading and analysis of secondary and primary source materials. In addition to the text for each course, instructors will assign relevant primary source documents. This course is taught in two semesters and covers world civilizations from prehistory through the Renaissance. Special attention is paid to culture and geography with an emphasis on spatial relationships, cultural diffusion and cause and effect. Students will become familiar with historical terms, understand the organization of history and the processes and resources of historical inquiry. Broad historical concepts like understanding bias, identifying perspective and determining relevancy are incorporated into class and homework exercises.

Required Text: Mazour, Anatole G. and John M. Peoples. *World History-People and Nations*

Honors World History I

2 semesters, 2 credits

Prerequisites: 85% or above on Placement test

History is a reading/writing-based discipline. Accordingly, instructors teach and reinforce the principles of good writing and reading and analysis of secondary and primary source materials. In addition to the text for each course, instructors will assign relevant primary source documents. This course is taught in two semesters and covers world civilizations from prehistory through the Renaissance. Special attention is paid to culture and geography with an emphasis on spatial relationships, cultural diffusion and cause and effect. Students will become familiar with historical terms, understand the organization of history and the processes and resources of historical inquiry. Broad historical concepts like understanding bias, identifying perspective and determining relevancy are incorporated into class and homework exercises. Additional reading and a strong emphasis on sophisticated writing techniques, research and historical documentation denote the Honors designation.

Required Text: Mazour, Anatole G. and John M. Peoples. *World History-People and Nations*

World History II

2 semesters, 2 credits, required

Prerequisites: Successful completion of World History I

History is a reading/writing-based discipline. Accordingly, instructors teach and reinforce the principles of good writing and reading and analysis of secondary and primary source materials. In addition to the text for each course, instructors will assign relevant primary source documents. This course is taught in two semesters and covers world civilizations from the Protestant Reformation through the year 2000. Special attention is paid to culture and geography with an emphasis on spatial relationships, cultural diffusion and cause and effect. Students will become familiar with historical terms, understand the organization of history and the processes and resources of historical inquiry. Broad historical concepts like understanding bias, identifying perspective and determining relevancy are incorporated into class and homework exercises.

Required Text: Mazour, Anatole G. and John M. Peoples. *World History-People and Nations*

Honors Western Civilization

2 semesters, 2 credits

Prerequisites: Grade of B or better in Honors World History I or Teacher Recommendation

History is a reading/writing-based discipline. Accordingly, instructors teach and reinforce the principles of good writing and reading and analysis of secondary and primary source materials. In addition to the text for each course, instructors will assign relevant primary source documents. This course is taught in two semesters and covers Western Civilization, particularly the study of Europe and its connections with Africa, Asia and America. Special attention is paid to culture and geography with an emphasis on spatial relationships, cultural diffusion and cause and effect. Special attention is paid to the political, economic, social, military, cultural, intellectual and religious aspects of European development around the world.

Required Text: Spielvogel, Jackson and Wiesel, Elie. *Western Civilization*

American History

2 semesters, 2 credits, required

Prerequisites: Successful completion of World History I and II

History is a reading/writing-based discipline. Accordingly, instructors teach and reinforce the principles of good writing and reading and analysis of secondary and primary source materials. In addition to the text for each course, instructors will assign relevant primary

source documents. This course is taught in two semesters and covers American history from colonization through the year 2000. Students will examine politics, culture, diplomacy, religion, geography, economy and global relationships.

Required Text: Murrin, John M. *Liberty, Equality, Power-A History of the American People, Politically Incorrect Guide to American History*

AP American History

2 semesters, 2 credits

Prerequisites: Grade of B or better in History I Honors and Western Civilization II Honors or Teacher Recommendation

This is a college class taught in the high school environment. This course covers American history from colonization through the year 2000 and is taught in two separate semesters. Students must take the College Board exam for college credit in May. The syllabus mimics a University of Colorado survey course in American history. Students analyze primary source materials, complete research in an off-site academic library, and further develop academic skills including historical documentation, critical analysis, recognition of bias, and cause and effect. Significant additional reading and writing is required. A culminating research project is required.

Required Text: Kennedy, David M., Lizabeth Cohen, Thomas A. Bailey, eds., *The American Pageant: A History of the Republic, Thirteenth Edition, Advanced Placement* Edition*, New York: Houghton Mifflin Company, 2006. Possibly: Frederick Douglass, *Narrative of the Life of Frederick Douglass, an American Slave*, Erich Maria Remarque, *All Quiet on the Western Front*.

American Government

1 semester, 1 credit, required

Prerequisites: Successful completion of American History

This is a semester long course designed to familiarize the student with the Constitution of the United States, the Bill of Rights, the three branches of American government (legislative, executive and judicial) and their interrelationship. Students concentrate on the structure, policies and effects that each document has on the development of the three branches of government.

Required Text: Light, John C. *A Delicate Balance*.

Economics

1 semester, 1 credit, required

Prerequisite: Successful completion of American History

This course provides an overview of micro, macro and international economics affecting the private enterprise system of the United States. Students will learn the fundamental concepts of economic theory using a college level textbook for classroom discussion and exercises. Upon completion of this course, students will have a better understanding how the science of economics is integrated into their daily lives as responsible citizens and future business consumers/leaders.

Required Text: Mankiw, N. Gregory, *Principles of Economics, 4th Ed.*

AP Macroeconomics

2 semesters, 2 credits

Prerequisite: Recommendation of Faculty

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. The 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.

Required Text: McConnell, Brue *Macroeconomics* and Mankiw, N. Gregory, *Principles of Economics*, 4th Ed.

Mathematics

JICHS's educational philosophy embraces the concept that mathematics is an essential component to the development of an educated mind. The disciplined approach of mathematics is readily extended to all other areas of thought, providing an essential element to many occupations and further schooling, especially in the sciences. The Saxon Publishers series is used in the math program. This series is based on the belief that students can master the concepts of math through daily practice. Each lesson contains only a few problems illustrating the concept introduced in that lesson. The remaining problems, which become increasingly more difficult as the year progresses, are a review of all previously presented concepts. Each lesson is thus a cumulative review, and the problems require that the students develop fluency in problem solving to successfully complete the lessons.

The minimum requirement for graduation from JICHS is four years of sequential mathematics at the high school level (beginning in grade 9); the lowest course that will count toward graduation is Algebra I. This means that all JICHS graduates must, at the minimum, successfully pass Algebra I, Intermediate Algebra, Geometry and Algebra II. Some students may be required to complete additional courses to prepare them for the required math curriculum. Students who begin with Algebra II or a higher math level must still complete eight semesters.

Course 3

2 semesters, 2 credits, Elective

Prerequisite: Placement test for incoming students

Saxon Course 3 is the third book in a five book series that focuses on preparing students for success in Algebra One and subsequent higher level math courses. This course embeds algebraic thinking into every lesson so the transition from arithmetic thinking to algebraic thinking is natural. Topics include fractional, decimal, and percent word problems, solutions of linear and rational equations, operations with scientific notation, and introductory geometry. Investigations at the end of each section provide students hands on experience with mathematical concepts. This course uses an incremental approach and covers a new concept each day. All concepts are cumulative and are tested throughout the year. Students develop understanding through rigorous daily homework and practice in class.

Required Text: *Saxon Math Course 3* Hake, Stephen

Algebra I

2 semesters, 2 credits, required

Prerequisite: Grade of C or higher in Math Course 3, placement test for incoming students

Algebra I is a comprehensive, first-year algebra course designed to prepare the student for higher math and science. This course deals with the fundamental concepts of algebra, focusing on those topics related to evaluating expressions and solving equations. Topics include linear and quadratic algebra, systems of equations, graphing, inequalities, radicals and real numbers, functions (to include exponential and polynomial), probability and statistics, and introductory geometry. Students may use a calculator only when authorized by the instructor. Normally, this will be second semester, and it must be a graphing calculator. This course uses an incremental approach and covers a new concept each day. All concepts are cumulative and are tested throughout the year. Students develop understanding through rigorous daily homework and practice in class on the board.

Required Text: *Algebra Common Core* Pearson

Intermediate Algebra

2 semesters, 2 credits

Prerequisites: Grade of C or higher in Algebra I

This course is the second course in the four-year sequence of Algebra I, Intermediate Algebra, Algebra II, and Geometry. It is intended to provide a slower-paced environment for students that need more time to fully develop their math skills. The emphasis of this course will be on increasing speed and accuracy in solving algebraic problems with an emphasis on basic algebra skills. The student entering this course must pass Algebra I with a minimum level of achievement, but require additional work to be ready for Algebra II. Successful completion of this course will prepare a student to take Algebra II.

Required Text: *Intermediate Algebra*, Martin-Gay, Elayn

Geometry

2 semesters, 2 credits, required

Prerequisites: Grade of C or higher in Algebra I

Geometry is the branch of mathematics that deals with points, lines, planes and solids of various shapes and examines their properties, measurement and mutual relations in space. Geometry is built upon a foundation of a few general assumptions or postulates that are used, with the help of deductive logic, to develop and prove other theorems which encompass the whole of a subject. As a mathematical science, geometry is the model of how modern mathematics continues to grow and develop in self-consistent, logical steps through the process of theorem and proof. This course explores geometry in a proof-based study, with emphasis in understanding how a statement can be justified using previously proven truths. This course prepares students to visualize certain principles of chemistry and physics and prepares students for other areas of academic studies because of its use of logic and deductive reasoning.

Required Textbook: *Geometry Common Core* Pearson.

Algebra II

2 semesters, 2 credits, required

Prerequisites: Grade of C or higher in Geometry

Algebra II builds on Algebra I and Geometry math skills and prepares a student for Calculus. This course uses abstract geometric concepts, the fundamental trigonometric ratios, and mathematical problem solving. Specific topics include graphical solutions of simultaneous equations, roots of quadratic equations, factoring, inequalities and systems of inequalities, logarithms and antilogarithms, conic sections, algebra of polynomials, vectors, set theory, and probability. This course uses an incremental approach in which small, new concepts are taught each lesson. The course is comprehensive and reviews and tests all material throughout the year. Students must prepare for this course by accomplishing rigorous daily homework and completing problems in class at the boards. All students must successfully pass Algebra II and its prerequisite courses in order to graduate.

Required Text: *Algebra II* Saxon, John H

Advanced Math I

2 semesters, 2 credits

Prerequisites: Grade of C or higher in Algebra II

Advanced Math contains an in-depth coverage of trigonometry, logarithms, analytical geometry, and upper-level algebraic concepts. It also completes the study of geometry. Specific areas of study include permutations and combinations, trigonometric identities, inverse trigonometric functions, conic sections, complex numbers, matrices and determinants, binomial theorem, and rational roots theorem. This course completes the first half of the Advanced Math book.

Required Text: *Advanced Mathematics* Saxon, John H.

Advanced Math II

2 semesters, 2 credits

Prerequisites: Grade of C or higher in Algebra II

Advanced Math contains an in-depth coverage of trigonometry, logarithms, analytical geometry, and upper-level algebraic concepts. It also completes the study of geometry. Specific areas of study include permutations and combinations, trigonometric identities, inverse trigonometric functions, conic sections, complex numbers, matrices and determinants, binomial theorem, and rational roots theorem. The course continues where Advanced Math I leaves off and finishes the rest of the Advanced Math text.

Required Text: *Advanced Mathematics* Saxon, John H.

Math Analysis /Trig Honors

2 semesters, 2 credits

Prerequisites: Grade of C or higher in Algebra II

Advanced Math contains an in-depth coverage of trigonometry, logarithms, analytical geometry, and upper-level algebraic concepts. It also completes the study of geometry. Specific areas of study include permutations and combinations, trigonometric identities, inverse trigonometric functions, conic sections, complex numbers, matrices and determinants, binomial theorem, and rational roots theorem. This class allows the accelerated students to complete the course in two semesters. Most students who complete Pre-Calculus in two semesters will then be able to complete Calculus.

Required Text: *Advanced Mathematics* Saxon, John H.

AP Calculus AB

2 semesters, 2 Credits

Prerequisites: Grade of C or higher in Math Analysis

Calculus covers all topics in the college advanced placement calculus. Graphing calculators are used extensively to show visual demonstrations of concepts and for confirming calculations. Specific topics include a review of functions, a review of trigonometry, limits, derivatives, integrals, techniques of integration, polar functions, areas between two curves, inverse functions, motion analysis, applications of integrals, continuity, course logarithmic differentiation, parametric functions, and logistic growth. This course will meet the needs of students and go as far as the students are capable. Most students should meet or exceed all college math entrance courses and some may test out of college calculus.

Required Text: *Calculus* Saxon, John H. and Wang, Frank

AP Calculus BC

2 semesters, 2 Credits

Prerequisites: Grade of C or higher in AP Calculus AB

Calculus BC covers all topics in the college advanced placement calculus AB. In addition, the course will cover parametric, polar and vector functions; analysis of planar curves; Euler's method of analysis of numerical solutions to differential equations; L'Hospital's Rule; derivatives of parametric, polar and vector functions; application of integrals; antiderivatives by substitution of variables; improper integrals; solving logistical differential equations; and polynomial approximations and series.

Required Text: *Calculus* Saxon, John H. and Wang, Frank

AP Statistics

2 semesters, 2 Credits

Prerequisites: Grade of C or higher in Algebra II

This college level course will introduce students to the basic concepts and tools for analyzing and collecting data. Broad themes include exploring data; sampling and experimentation; anticipating patterns; and statistical inference. The course will be designed to support students in passing the AP exam in May of each year. The course will cover exploratory analysis (20-30%), planning and conducting a study (10-15%), probability (20-30%), and statistical inference (30-40%). The class is technology intensive in order to introduce students to the interactive process between data and mathematical models.

Required Text: *The Practice of Statistics* Yates, Daniel, Moore, David and Starnes, Daren.

Science

Science and the scientific method are essential for understanding the world and our place in it. The high school science program will be based upon the three “pillars” of science: Biology, Chemistry and Physics. These three courses are the basic foundation for all other scientific fields of study. Moreover, they form a continuity of understanding in which knowledge from one supports and extends the conceptual framework of the others. In addition to standard textbook coursework, studies in the science program will include laboratory work, data analysis, proof of basic laws and principles (analytically and/or experimentally), problem solving, and scientific reasoning. Awareness of the nature and limitations of science as well as its relationship to and dependence on other academic disciplines will be fostered.

Students must successfully complete six semesters (three courses) from the science curriculum. A student must complete Biology, Chemistry and Physics to meet their science graduation requirements.

Earth Science

2 semesters, 2 Credits, Laboratory Course

Prerequisites: none

This is a two-semester college preparatory course designed to set the foundation and teach skills and knowledge necessary for success in higher-level earth and physical science courses. This course also prepares students for biology, chemistry, and physics and includes curriculum material from these three disciplines. It incorporates outside readings particularly to increase exposure to principles of chemistry and use of minerals. The course covers earth composition including minerals and rocks, earth forces, earth features, weather, and oceans. Additionally, it covers our solar system and the universe. Students will complete approximately 25 hours of lab work and prepare several written and oral presentations.

Required Text: *Earth Science:* Holt.

Honors Earth Science

2 semesters, 2 Credits; Laboratory course

Prerequisites: Enrolled in Algebra I

This two-semester course is designed for students who are considering a career dependent on a solid foundation in the sciences. It is particularly designed for those interested in geology, geophysics, mining, or mineralogy. It includes the basic earth science curriculum but with an increased emphasis in chemistry and physics, particularly as it relates to structural and environmental geology. Additional material exposes students to cartography, point location, mining, the economic uses of minerals, mineral identification, fossils, gemstones in our society, mineral identification, and fossils. Students will recover, analyze, and identify rocks and minerals using laboratory equipment. Students will also complete approximately 35 hours of lab and fieldwork, including one experiment which they design, carry out, and present through a written and oral report. Saturday field trips to area mines and areas of geologic interest will be offered.

Required text: *Modern Earth Science*: Sager, Robert J. and others.

Biology

2 semesters, 2 Credits; Laboratory Course, required

Prerequisites: Enrolled in Algebra I

This is a two-semester college preparatory course designed to set the foundation and teach skills and knowledge necessary for success in higher-level biology courses. Designed to give the student a broad exposure to all major aspects of biology, it incorporates a greater emphasis on molecular biology, plants and vertebrate animals in their environments, ecology, and human physiology. Students will complete approximately 30 hours of lab work and present several short papers on assigned topics.

Required Text: *Biology: Principles and Explorations*: Johnson, George B and Raven, Peter H.

Honors Biology

2 semesters, 2 Credits; Laboratory Course

Prerequisites: Enrolled in Algebra I

This is a two-semester college preparatory course designed for students who are considering a career in the sciences, particularly life sciences, with an emphasis on human biology and medical sciences. Course emphasis assumes the student has a good grasp of biology concepts and builds on this understanding. As a result, breadth and depth are greater than the regular course. Areas emphasized include biochemistry, molecular biology, and human biology. Students will complete at least one, long-term lab. They will also complete approximately 35 hours of standard lab work covering microbiology, cellular processes, taxonomy, and animal dissections. Students will write and orally present several short papers on assigned topics.

Required Text: *Modern Biology*: Holt, Rinehart, And Winston

Advanced Biology

2 semesters, 3 Credits; Laboratory Course with weekly 2 hour labs

Prerequisites: Grade of C or higher in Algebra I and Biology

This is a two-semester college preparatory course designed for students who are considering a career in the sciences, particularly life sciences, such as wildlife management or environmental science. This curriculum is separate but builds on the basic biology curriculum; therefore, the basic biology course or an equivalent biology course is a prerequisite. Students will select from several topics and study others in greater depth than the core biology course. Areas of study may include biochemistry, microbiology, organic chemistry, genetics, human anatomy and physiology, human pathology, ecology, environmental issues, wildlife management, and zoology. Students will complete approximately 35 hours of lab and field work. Additionally, they will design, plan, and carry out one experiment which will include a written and oral report. This course is offered to cover a two hour block with one hour being a study hall or lunch period. At least once a week this course will meet for field or lab work which requires use of this second hour.

Required Text: *Elements of Ecology*: Smith Robert L. and Smith, Thomas M., and *Biology: Principles*

And Explorations: Johnson, George B and Raven Peter H.

AP Biology

2 semesters, 2 Credits

Prerequisites: Biology or honors biology

This is a two-semester college preparatory course designed to give students college credit upon successful completion of the AP exam in May of each year. The course aims to not only give students factual knowledge but also the analytical skills to think critically about

the field of biology. The exam (and thus the course) covers molecules and cells (25%), heredity and evolution (25%) and organisms and populations (50%). The course aims to develop students' appreciation of science as a process rather than an accumulation of facts and therefore provides opportunities for students to personally experience scientific inquiry through a number of laboratory sessions (one fourth to one third of the class). The course will also support students' integration of knowledge of various topics in biology and their environmental and social impacts. The major themes covered in the class include science as process; evolution; energy transfer; continuity and change; relationship of structure to function; regulation; interdependence in nature; and science, technology and society.

Required Text: *Biology: AP Edition* Campbell, Neil

Human Anatomy and Physiology

2 semesters, 2 Credits

Prerequisites: Grade of C or higher in Algebra I and Biology

This is a college preparatory, combined, human anatomy and physiology course designed for students who are considering a career in the sciences, particularly life sciences, medical sciences, or sports medicine. The course expands the standard biology course coverage of human anatomy and physiology. It covers basic life chemistry, organization of the human body, cells, and tissues. Each body system is examined in depth. Further material addresses health issues and common disorders. Laboratory work includes in-depth comparative dissections. The course will require about 30 hours of laboratory work.

Required Text: *Introduction to the Essentials of Anatomy and Physiology:* Tortora, Gerard J and Grabowski, Sandra R.

General Chemistry

2 semesters, 2 credits: Laboratory Course

Prerequisites: Enrollment in or completion of Geometry

This is a two-semester laboratory chemistry course which is a qualitative, quantitative and analytical study of matter. Areas studied through both lecture and laboratory investigations include elements and compounds, their composition and interactions, and the energies involved. Other topics will include the scientific method, chemical bonds, the mole concept, ideal gas laws, energy, states of matter, the Periodic Law and Table, organic chemistry and nuclear chemistry. Chemistry is concerned with the study of the properties and structures of matter. Each student is expected to conduct independent problem solving and open-ended laboratory work. This course requires a solid understanding of algebra and geometry principles.

Required Text: *Holt Chemistry.*

Honors Chemistry

2 semesters, 2 credits: Laboratory Course

Prerequisites: Enrollment in or completion of Geometry

This is a two-semester college preparatory laboratory chemistry course which is a qualitative, quantitative and analytical study of matter. Areas studied through both lecture and laboratory investigations include elements and compounds, their composition and interactions, and the energies involved. Other topics will include the scientific method, chemical bonds, the mole concept, ideal gas laws, energy, states of matter, the Periodic Law and Table, acids, bases, electrochemistry, organic chemistry and nuclear chemistry. Chemistry is concerned with the study of the properties and structures of matter. Each student is expected to conduct independent problem solving and open-ended laboratory work. This course requires a solid understanding of algebra and geometry principles.

AP Chemistry

2 semesters, 2 credits: Laboratory Course

Prerequisites: Completion of General Chemistry (or Honors Chemistry)

This is a yearlong college level course based upon intense academics and rigorous laboratory application. Topics such as Structure of Matter, States of Matter, Reactions, and descriptive chemistry will be keenly studied and tested upon throughout the year and in the AP exam at the end of the year. Students will deepen their comprehension and skills of chemistry by practical application, mathematics, and logic.

Required Text: *Chemistry Matter and Its Changes, fourth Edition.*

Physics

2 semesters, 2 Credits; Laboratory Course

Prerequisites: Grade of C or higher in Algebra I and enrolled in Geometry

Physics is the science of observation, comprehension, and prediction of the behavior of objects in the physical world. It is a way of understanding the form and function of the universe in terms of fundamental physical concepts such as motion, forces, mass, energy, vector fields, and potential. It depends on the ability to quantify and measure these fundamental concepts in an objective and accurate manner and to embody them in mathematical models so as to predict the behavior of physical objects. As an experiment-based science, it uses laboratory tests and measurements to support the understanding of physical behavior. Because physics applies mathematics to describe the behavior of things, a firm understanding and use of mathematics is essential. In this course, the student is expected to be proficient in Algebra I and Geometry. Advanced mathematical concepts and techniques will be taught as needed in the course.

Required Text: *Holt Physics* by Serway, Raymond A. and Faughn, Jerry S.

AP Physics 1

2 semesters, 2 Credits; Laboratory Course

Prerequisites: Grade of C or higher in Algebra I and enrolled in Geometry

Advanced Placement Physics 1 is an Algebra-based course that is the equivalent of a first-semester college course in algebra-based physics, but is designed to be taught over a full academic year. Having a full year enables AP students to develop deep understanding of the content and to focus on applying their knowledge through inquiry-based labs. The full year also allows time for inclusion of physics content specified by state standards. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; mechanical waves and sound. It also introduces electric circuits. Students must take a college-level examination at the completion of the course for potential college credit. It is NOT required to take AP Physics 2 after completion of AP Physics 1.

Required Texts: *College Physics: A Strategic Approach AP Edition* by Knight, Jones, and Field; Pearson

AP Physics 2

2 semesters, 2 Credits; Laboratory Course

Prerequisites: For the 2014-2015 school year ONLY: Physics – For 2015-2016 and beyond: AP Physics 1

AP Physics 2 is an algebra-based course that is the equivalent of a second-semester college course in algebra-based physics, but is designed to be taught over a full academic year. Having a full year enables AP students to develop deep understanding of the content and to focus on applying their knowledge through inquiry-based labs. The full year also allows time for inclusion of physics content specified by state standards. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; atomic and nuclear physics. Students must take a college-level examination at the completion of the course for potential college credit

AP Environmental Science

2 semesters, 2 credits; Laboratory Course

Prerequisites: Grade of C or higher in Algebra I..

Prerequisites: Advanced Placement Environmental Science is a two-semester college-level course designed for students who wish to receive college credit for a one-semester, environmental science course. This course satisfies the lab science core course required by colleges. The course combines earth science, biology, and chemistry. Prerequisites include earth science or chemistry and biology. Each student will participate in at least 40 hours of laboratory and field work. Students will collect field data and conduct planned experiments related to environmental problems. Students will present a paper and defend arguments for or against selected global issues. Course curriculum covers interdependence of earth systems, human population dynamics, renewable and nonrenewable resources, quality of the environment, global changes and consequences, and the environment and society. This course is offered to cover a two-hour block with one hour being a study hall or lunch period. At least once a week this course will meet for field or lab work which requires use of this second hour. Students must take a college-level examination at the completion of the course for any potential college credit.

Required Texts: *Living in the Environment: Principles, Connections, and Solutions:* Miller, G. Tyler and *the Skeptical Environmentalist:* Lomborg, BjornBarbara.

Physical Education

Physical Education

1 semester, 1 credit, required

Prerequisite: None

This course will include a study of concepts and fundamentals of each sport and activity.

In Physical Education students will be analyzing three basic foundations: 1) cognitive skills which deal with knowledge and understanding of the activity, 2) affective skills which deal with the social and emotional skills, and 3) psychomotor skills which deal with basic physical movements and physical fitness. A 2-page paper answering the question of how does athletics and life relate or what is difference between high school and college sports. A field trip may be undertaken to Olympic Training Center.

Electives

Technology Education

Computer Applications

1 semester, 1 credit, Elective

Prerequisite: none

This course helps students adjust to the technology era of the new millennium. They create papers, presentations, excel charts, and web pages. Students learn to edit photos and increase their typing speed. By the end of the semester students will be fluent in Microsoft Office Word, Excel, and PowerPoint 2007, along with select programs from Adobe CS4. Emphasis will be placed on problem solving with word processing, spreadsheets, presentations, graphics and web design.

Text: None – EMC Office Interactive

Pre-AP Computer Science

1 Semester, 1 Credit

Prerequisites: N/A

PreAP: Introduction to Computer Science is a one-semester course that serves as an introduction to Computer Science to students of all grades. This course covers programming techniques using the Java language and the Object Oriented Programming paradigm. Topics include classes, Object-Oriented programming, primitive data types, object behavior, libraries, and APIs, simple input and output, loops, decisions, recursion and Strings. Students will be introduced to the Karel J Robot class written by Joseph Bergin and use it to solve problems throughout the semester. Students will also receive introduction to the Alice class and Jeroo programming environments as a means to introduce Java programming. Specific focus for the class will be to prepare students for entry to the PreAP: Introduction to Computer Science two semester class. Techniques of problem solving will be stressed heavily as well as ethics as they relate to technology. The class is fast-paced and requires the student to have computer access and internet access at home.

AP Computer Science

2 semesters, 2 credits (may qualify as third year of world language)

Java Programming

Prerequisite: Geometry/Introduction to Computer Applications and access to a Pentium computer for homework and projects

The primary goal of this course is to introduce students to the field of computer science through the discipline of programming. The use of this Java programming language is designed to teach students about object-oriented software design and programming. This is a two-semester course, assuming 30 weeks are available prior to the AP exams. Approximately 50% of the class time will be devoted to labs. The students will learn to write Java code in a well-structured fashion and learn the use of object oriented design and algorithm implementation. They will learn common sorting, searching, and array operations. Using a Marine Biology Simulation case study will bring all of these concepts together and prepare the students for the AP exam.

The course includes several individual programming projects assigned for one or two weeks each. Students complete their work on Windows-based machines using the Java2 SDK 1.4.2 and in the JCreator environment. (Complete environments are available for home use.)

Text: Java Methods: Litvin & Litvin, Skylit Publishing

Photojournalism

2 semesters, 2 credits, Elective

Prerequisite: Computer Applications or comparable computer skills

This course will create, layout and distribute the high school newspaper as well as the school's yearbook. Students learn the difference between writing an essay and writing an article. Students take on newspaper jobs such as editor in chief, features editor, sports editor, opinions editor, and reporter. Each person is not only responsible for writing articles every week, but also taking the appropriate pictures and putting them into the paper. Digital photography will be explained and basic principles of photocomposition will be studied. Students become familiar with Microsoft Publisher, Microsoft Word, and Adobe Photoshop. In addition, student will take on yearbook positions such as editor-in-chief, sports editor, student life editor, and business manager. By the end of the year every student is fluent in the programs and every journalism job. They will know and live by the deadlines required for satisfactory completion of the yearbook and all newspaper editions.

Attendance at some school functions and after-school meetings is a requirement for this class.

Fine Arts

Through a serious study in the arts, each student will develop judgment and appreciation for the arts one of the highest creations of human effort. Armed with this background, the entire rich world of art is available for appreciation and understanding. One semester of art and one semester of music in the Fine Arts at the high school level are required for graduation.

Art

Art courses include art history, perceptual skills and studio work and allow for students' individual achievement levels and can be taken sequentially to improve skills. Students taking art classes will pay an art materials fee and may be asked to supply material for individual projects.

Art I

1 semester, 1 credit, required

Prerequisite: none

This introductory class allows students the opportunity to explore and experiment with media and techniques that they may not have worked with before. Two-dimensional media such as ink, pencil, charcoal, pastels, and acrylic paint, along with three-dimensional media such as clay, papermaking, weaving, and wire sculpture will be investigated. Basic drawing skills and right brain research will be taught along with techniques for using grid systems and cutting mats for framing artwork. Basic elements and principles of art will be discussed, as well as topical art history movements and techniques necessary for successful art critiques.

Required fee and supplies: \$25 materials fee*; a sketchbook (approximately 8" x 10") OR a 3-ring binder with copy paper should be brought to the first class.

Art II

1 semester, 1 credit, Elective

Prerequisite: Successful completion of Basic Art

This course will cover more complex art media and techniques. Students will explore aspects of drawing, painting, design, ceramics, paper and fiber art, animation, and other applications. Projects may include perspective drawing and shading using pencil, ink, and conté crayons; collage and other mixed media applications of design; traditional and unorthodox methods of creating ceramics, fiber art, and paper art; as well as experimentation with screen-printing or batik.

Supplies: \$25 materials fee*; a sketchbook (approximately 8" x 10") OR a 3-ring binder with copy paper should be brought to the first class.

Drawing and Painting

1 semester, 1 credit

Prerequisite: Successful completion of Basic art

This course will explore and study different types and more complex media and techniques of drawing and painting. The process of "seeing" and creating expressive as well as formal drawings and paintings will be explored, along with the improvement of drawing and painting skills. The art of animation will be explored as time permits. Media may include pen and ink, conté crayons, pastels, acrylic paint, gouache, casein, oil sticks, and watercolor. Projects may include perspective and figure drawing, shading techniques, mixed media applications, paper art, batik, animation, and screen-printing. Basic elements and principles of art will be discussed, as well as topical art history movements and techniques necessary for writing successful art critiques.

Supplies: \$25 materials fee*; a sketchbook (approximately 8" x 10") OR a 3-ring binder with copy paper should be brought to the first class.

3D Art

1 semester, 1 credit

Prerequisite: Successful completion of Art I

This course will cover the techniques of collage, construction, assemblage, wire sculpture and mixed media applications. Some projects may be patterned after famous works from art history. Basic elements and principles of art will be discussed, as well as topical art history movements and techniques for writing successful art critiques. The class will include a study of some major art periods and three-dimensional masterpieces throughout history, especially the 20th century; some projects may be patterned after famous works of art. Artwork will be analyzed using traditional criteria, including elements and principles of art. The class may also compete in the annual Design and Build competition sponsored by the Museum of Outdoor Arts (spring only).

Supplies: \$25 materials fee*; a sketchbook (approximately 8" x 10") OR a 3-ring binder with copy paper should be brought to the first class.

Digital Design I

1 semester, 1 credit

Prerequisite: Art I & Computer Applications; or comparable skills as determined by teacher

This introductory course will teach Adobe Photoshop as a drawing and design tool. Students will explore basic toolbar commands, drawing tools, filters, techniques of composition, as well as advanced topics such as scanning and seamless digital composites. In addition, digital photography, basic principles of photocomposition will be studied. Student critiques will be used to augment discussion of the basic elements and principles of art. Other graphic and design programs such as Quark Express may be explored as time permits.

Supplies: \$15 materials and printing fee*; a signed Network User Agreement; and a signed Contract due by the end of the first week of class.

Digital Design II

1 semester, 1 credit

Prerequisite: Successful completion of Digital Design I

This class will continue the study of Adobe Photoshop, with emphasis on graphic design and photocomposition. Students will use Photoshop. Other graphic and web design programs such as Quark Express; and Macromedia Dream Weaver, Flash, Fireworks, and Freehand will be explored as time permits. Student critiques will be used to augment discussion of the basic elements and principles of art.

Supplies: \$15 materials and printing fee*; a signed Network User Agreement; and a signed Contract due by the end of the first week of class.

Art History

1 semester, 1 credit

Prerequisite: none

This course will include a study of major art periods and masterpieces throughout history. Artwork will be analyzed using traditional criteria, including elements and principles of art. One or more simple art projects will be assigned to implement understanding of specific

art movements, and a research project is required. A field trip may be undertaken during the semester to view art of specific artists and/or movements.

Required text: *The Annotated Mona Lisa: A Crash Course in Art History from Prehistoric to Post-Modern*, Carol Strickland and John Boswell.

Ceramics

1 semester, 1 credit

Prerequisite: Successful completion of Art I

This course will cover ceramics and ceramic techniques and some ceramic history. You will explore clay through coil, hand-building, slab and wheelwork. Projects may include sculpture, boxes, mugs and bowls and freeform pieces. Students will find a method of clay they can master and enjoy and will learn to form and defend judgments and evaluate the effectiveness of artwork in terms of organizational principles and functions. They will also learn to apply subjects, symbols, and ideas in artwork and use the skills gained to solve artistic problems. And create a portfolio that can be used in the continuation of artistic studies. Students will apply the elements of art, principles of design, and sensory and expressive features of visual arts and relate the visual arts to various historical and cultural traditions.

Supplies: \$25 materials fee; a smock, apron or shirt

AP Studio Art

2 semesters, 2 credits

Prerequisite: Successful completion of Art I or Art History, and at least one other art class; comparable skills as determined by teacher

This course is a yearlong course designed for the highly-motivated students who are seriously interested in the study of art. Creativity and the investigation of formal and conceptual issues of art will be discussed as well as an emphasis in the technical skills of making art. Students will become more self-directed, more self-motivated, and more independent as they choose the subject matter and media for their artworks. At the end of this course, students will submit a portfolio for assessment of college-level credit; there is no written exam. This course demands a significant financial and time commitment by students.

Required text: None

Supplies: 1) \$25 materials fee PER SEMESTER, due by the END OF THE FIRST FULL WEEK OF CLASS, plus the cost of slides and other materials needed for portfolio submission; 2) a sketchbook, approximate six 8" x 10", or a 3-ring binder with plain copy paper (NOT lined notebook paper)—sketchbooks used in previous art classes are acceptable; 3) AP fee (currently \$86) ; and 4) parental and student signatures on the attached contract, due END OF THE FIRST FULL WEEK OF CLASS. To have your artwork shown on certain websites, exhibitions, and competitions, an Artist Release form must be signed and returned; it will be retained by the school.

*Note regarding art studio classes: **If the fee is not paid, the student will be required to purchase their own supplies and equipment for the class (list will be provided).***

Drama

Drama

1 semester, 1 credit, Elective

Prerequisite: none

As theatre is a collaborative art form, we (the ensemble) will explore the diverse styles of theatre that have existed throughout history and develop an understanding for the evolution of theatre through the modern day. Acting techniques, design processes, and directorial choices will also be explored and we will apply those techniques to play analysis and performance projects. Aesthetic appreciation for the art of theatre and the philosophical reasons for human expression will also be explored.

Required Text: *Theater in Action*

Music

Music Appreciation

1 Semester, 1 credit

Prerequisites: none

This course gives the student the opportunity to expand their knowledge through the study of music. The student will learn how to read and listen to music while learning about different types or genres of music as well as those who used and perfected those different types. This course will cover the musical periods starting with medieval progressing through the Renaissance, Baroque, Classical, Romantic, Impressionistic, and contemporary.

Band

1 semester, 1 credit

Prerequisites: Instrument playing-2 yrs.

Band will serve as an opportunity to play an instrument in a group with other students. There will be performances throughout the year. Instruments in band include (but are not limited to) the following: Flute, Clarinet, Oboe, Saxophone, Trumpet, Trombone, French Horn, Tuba, Percussion, Violin, Viola, and Cello. Students are responsible for supplying their own instrument; although, for percussion as well as some of the larger instruments, the school will provide the instrument.

Choir

1 semester, 1 credit

Prerequisites: Audition

Choir will serve as an opportunity to sing in a group with other students. There will be performances throughout the year. The choir performs all styles of music, from sacred to folk, from classical to pop. This is a mixed choir, usually singing four part SATB. It is an enjoyable time where students learn to work together as a team while improving their own musical ability.

Honors Choir

2 semesters, 2 credits

Prerequisite: Audition required

The James Irwin Charter High School Honors Choir is an auditioned choir that represents the finest singers on the James Irwin campus. Students will study and perform different styles of choral music, including some experience in show choir performance composed specifically for advanced choral ensembles. Student achievement will involve development of individual musicianship, vocal technique, and ensemble singing. The Honors Choir will perform at concerts, shows, and choral festivals, school functions and JICHS commencement ceremonies. Music fee or participation in music fundraisers is required.

Character Enrichment

Character and Ethics

1 semester, 1 credit, required

Prerequisites: none

Character may be defined as that inner quality or strength which directs our personal moral compass and from which emerge our moral choices. Ethics might be understood as the deliberate and thoughtful process of assessing our moral values and of coming to moral decisions. Both can and indeed should be taught. At a time in our history, when we are confronted with so many different choices, value systems, examples of behavior, “hero” figures (and anti-heroes), and so much conflicting information, the deliberate and self-conscious study of what we hold to be good and of how we come to make our moral choices has become vital skill, vital to both the individual and to our society. This course lays a foundation for character development and moral reasoning, a foundation that serves to support James Irwin Charter Schools’ mission to help develop the character and leadership potential of all its students throughout their tenure here. Benjamin Franklin’s list of virtues will be used as a guide into the study of Character and Ethics.

Required Text: *The Character Revolution: Restoring America’s Soul:* Carawan, Rolfe and *The 7 Habits of Highly Effective Teens:* Covey, Sean.

Law and Morality Honors

1 semester, 1 credit, Elective

Prerequisites: Recommended for juniors and seniors

Law and Morality is an advanced writing and rhetoric course that introduces students to a variety of topics that relate to notions of ethical, philosophical and legal interest. The readings vary in historicity and approach the topic from a Western mind set. It is desired that by reading these topics students will be emboldened to further read and research specific areas of interest. Topics to be included but are not limited to the understanding a philosophy of law; is there absolute truth or is truth relative? How can the truth be known? Do we have a right to be happy? What or who is evil and why? Do we have the right to own property? What is the morality of suicide? What is self and societal alienation and what must be done to live life with value and dignity? There may be at least one field trip to the Woman’s Correctional Facility in Canon City, CO. There will also be a panel discussion with various thinkers, academics and professionals who will field questions from the students at the end of the semester.

Required Text: *Law and Morality:* Compiled and Edited by Will, M.K.2002.

Critical Thinking

1 semester, 1 credit, Elective

Prerequisites: none

The first part of the course will help students become critical thinkers, i.e. become people who think about thinking. Critical thinking employs the left brain to analyze, judge and prioritize information. The students will practice mind mapping techniques and other organizational skills. Texts will be analyzed as well as popular culture for biases, missing information, faulty logic, etc. The second part of the course is about problem solving. The capacity to come at old questions from new perspectives, to raise new questions about old problems, and to creatively respond to our ever changing world in new and paradigm shifting ways is one of the benefits of creative thinking. This course will provide numerous techniques for tapping into the student’s creative potential to develop the ability to become a creative problem solver.

Required Text: *The Art of Thinking:* Ruggiero, Vincent Ryan

