

# Jesuit College Preparatory School

## Course Offerings

### 2010-2011

#### Theology Department [100]

*The courses listed in this section comprise the four credit Theology requirement. Senior theology will be comprised of 2 one-semester courses; seniors will choose two out of 3 courses.*

#### **Bible [112]**

*Credit: 1.00*

Prerequisites: Freshman status

Description: The purpose of the Hebrew Scripture segment of this course is to introduce the students to the Bible as God's self-communication. In the study of the Hebrew Scriptures, students are able to locate themselves in a faith community anchored in a covenant relationship that spans 3,000 years. The people, customs, religious practices, and beliefs about God found in the New Testament can only be understood by first understanding the Hebrew Scriptures. It is hoped that the learning experiences in this segment of the course will assist students in making their own personal response to God's Word.

The purpose of the Christian Scripture segment of the course is to help the students use the New Testament as their first source for understanding the meaning of Jesus and his message. By applying the Scripture reading skills learned throughout the course to the Christian Scriptures, students are able to truly meet the Jesus of History and respond to the Christ of Faith. The Scriptures are experienced as a way students can strengthen and deepen their prayer and make their relationship with God vital and alive.

#### **Prayer and Sacraments [124]**

*Credit: 1.00*

Prerequisites: Sophomore status

Description: This course aims to help the student develop and understand his own personal spirituality by studying and practicing a variety of prayer forms present in the Catholic tradition. In particular, the course introduces students to Ignatian Spirituality through the study and practice of the Spiritual Exercises and the Examen. By studying and practicing Ignatian contemplation, the student develops an ability to interpret and apply Scripture passages to his own life.

The course assists the student in developing the ability to make moral choices consistent with Gospel values by studying and learning to apply Ignatius' rules for discernment to life situations. Through the Spiritual Exercises, the student develops an appreciation for the important role of his own experience (especially his feelings) in making life decisions. The student learns how to live out his spirituality in an individual and communal context through participation in the Sacraments and acts of service. By studying the meaning of the rituals and the symbols used during the celebration of the Sacraments, students develop a deeper appreciation for them and are able to more fully participate in their celebration.

#### **Faith/Morality/Justice [136]**

*Credit: 1.00*

Prerequisites: Junior status

Description: Faith - Students first explore the richness of our existence and faith in the Judeo-Christian tradition. Through readings, discussions, critical thinking exercises and reflections, we hope to teach them what it truly means to "do theology." By studying the fundamental concepts of theology, faith, grace, free will, original sin, indulgences, justification and salvation, the existence of God, Jesus as human and divine, the Holy Spirit, the Church today, religion, worship, and the sacraments, a student should possess a renewed awareness of the presence and urgency of these fundamental concepts in his own life and a

wide array of responses culled from the history of Christian thought, which are then further enhanced in the morality and justice component.

Morality - The student is assisted in achieving a better awareness and understanding of the nature and meaning of Christian morality, particularly within a Catholic Christian context, in order to assist him in making better and wiser moral judgments. The intention of this section of the course is to help the student to live his convictions through thought and action. Emphasis is placed on those tools necessary to make moral decisions.

Justice - Building upon the student's background in morality, the young adult is exposed to the complexities of global economic and social systems. This course provides a Christian framework for response.

### **Christian Relationships [147]**

*Credit: 0.50*

Prerequisites: Senior status

The emphasis in this course is to pursue the meaning of the commandment "love one another" and to more fully understand the theological belief that "God is Love." Our humanness is understood through our relationship to self, with others and with God.

The topics discussed are: the disciplines needed for growth and maturity, the totality of human sexuality as a way of being in this world as well as sex itself, the psychological and physical differences in being male or female

*This class meets three times a week.*

### **Christian Anthropology [157]**

*Credit: 0.50*

Prerequisites: Senior status.

Description: Students are introduced to Christian Anthropology. Where do we come from? Why are we here? Where are we going? How can we get there? These questions of the human condition are asked amid the joys and failures, possibilities and limitations of life. Students will study and reflect on the human condition in terms of freedom, community, sin, grace and death. Through the semester the students will come to see that the Christian faith has a particular vision of God, the world and humanity and it is rooted in the person of Jesus Christ. The students will consider this vision as it applies to them in their world.

*This class meets three times a week.*

### **Inter-religious Dialogue [167]**

*Credit: 0.50*

Prerequisites: Senior Status.

Description: "*In our contemporary globalized world, where technology, environmental and other concerns challenge traditional boundaries, the Society's mission of faith and justice and of dialogue of religions and cultures gives new meaning to the frontiers of knowledge and human encounter.*" "*All men and women are our concern for dialogue and for proclamation . . . to discover Jesus Christ where we have not noticed him before and to reveal him where he has not been seen before*" (GC of the Society of Jesus). The purpose of this course is to help the students understand the manner in which the Catholic Church relates to non-Catholic Christians as well as to other religions of the world. The course is intended to help students to recognize the ways in which important spiritual truths can also be found in non-Catholic Christian churches and ecclesial communities as well as in non-Christian religions (USCCB Curriculum Framework).

## English Department [200]

*Four credits of English are required for graduation.*

### **Criteria for English Pre-AP and AP Courses**

Upperclassmen requesting Pre-AP or AP English courses must qualify according to the following criteria as established by the English Department:

1. To be considered as a potential candidate for Pre-AP or AP English, each student must have achieved, in both semesters an average of 80 in his present Pre-AP or AP English class or an average of 93 in his present regular English class. Students not meeting these criteria may be placed in Pre-AP or AP English based on extenuating circumstances as presented by the instructor in consultation with the Department Chair and Assistant Principal of Student Academics.
2. Recommendation of previous English teachers will be considered.
3. Each student wishing to move from a regular English class to a Pre-AP or AP class will be required to sit for a writing examination. The times for these exams will be announced by the department; these exams will be evaluated by a team of English instructors.
4. Students not maintaining an average above 80 in a Pre-AP or AP English class may be transferred to a regular section at the end of the first semester.

An application process is required for admission into Honors English Seminar. See the instructor for this course or your guidance counselor for an application, including deadlines.

### **Pre-AP English 1 [211]**

*Credit: 1.00*

Prerequisites: Freshmen students will be ranked in order of their scores on the Verbal Aptitude and Reading Comprehension portions of the entrance examination. Additionally, the department will evaluate the writing samples from the entrance examination. Class size may limit availability.

Description: This is a foundation-building course. The course is also reading and writing intensive. There is a review of grammar rules and usage problems. Students are asked to apply what they learn in the grammar review to their own writing. They read short stories, essays, novels, plays, and poetry. From classic works of literature to contemporary novels, all the genres are covered over the course of the school year. Students are asked to discuss the literature and to write and revise critical essays over the works read. Students write different types of paragraphs, essays, critical papers, and poems.

### **English 1 [212]**

*Credit: 1.00*

Prerequisites: Freshman status.

Description: This is a foundation-building course. There are three main areas of study: grammar, literature, and composition. There is a comprehensive review of grammar on the freshman level. Students are quizzed over grammatical rules and are asked to apply usage rules to their writing. Students read many works of literature, covering all the genres. Students read short stories, several novels, essays, plays, and poems. Sentence structure and paragraph development are the primary focus of the students' writing. Besides writing different types of paragraphs, students write essays and critical papers over what they read. Creative writing is also covered through journals and poetry.

### **Pre-AP English 2 [223]**

*Credit: 1.00*

Prerequisites: Sophomore status. Qualification based on the Departmental criteria.

Description: In addition to the material covered in English 2, Pre-AP English 2 continues the work begun in Pre-AP English 1. Close reading and writing assignments are more rigorous and students concentrate on American literary themes.

### **English 2 [224]**

*Credit: 1.00*

Prerequisites: Sophomore status.

Description: Sophomore English presents a survey of American Literature from its roots to the second half of the 20th century. The course is designed to help the student read more deeply and richly, with greater insight and understanding, see connections between works, draw appropriate conclusions, strengthen critical thinking skills, formulate and support a thesis, and gain an understanding of what constitutes the American experience.

### **AP Literature and Composition [235]**

*Credit: 1.00*

Prerequisites: Junior status. Qualification based on the Departmental criteria.

Description: This course follows the theoretical structure of English 3. Supplemental readings include established literary classics, which provide students an opportunity to read texts closely, examining how diction, imagery, details, language, and sentence structure affect meaning and tone. Students work throughout the year mastering these skills of literary argument both in oral form and in written form. Written work primarily includes demonstrating mastery of the literary argument, positing a sophisticated thesis for one-thousand to two-thousand word essays. By May, the student should be prepared to succeed on the AP Literature & Composition exam. This course will include a summer reading/writing assignment.

### **English 3 [236]**

*Credit: 1.00*

Prerequisites: Junior status.

Description: Junior English explores the major literary works and periods of British literature: Beowulf, The Canterbury Tales, Shakespeare, Romantic Age, Victorian Age. Supplementary texts are often assigned, for example, Great Expectations, Lord of the Flies, The Tempest, The Power of One, Frankenstein. Class discussion encourages students to identify the larger patterns of epic, tragedy, comedy, and lyric. In addition, students concurrently develop analytical writing skills, primarily positing a literary thesis and defending it in an organized essay with well-elaborated, coherent paragraphs. Writing topics are literary and at times incorporate secondary research material. Moreover, the study of grammar is used as a means to improve and comment on writing style and sentence structure, exploring a more sophisticated understanding and use of language.

### **AP Language and Composition [247]**

*Credit: 1.00*

Prerequisites: Senior status. Qualification based on the Departmental criteria.

Description: This course stresses those writing and reading skills relevant to the national Advanced Placement program and test. It emphasizes close and critical reading of prose and poetry and intensive development of the student's own writing skills, especially his own style. Literature study focuses on classical world literature with an emphasis on British and American authors.

*This class meets three times a week*

### **English 4 [248]**

*Credit: 1.00*

Prerequisites: Senior status.

Description: Senior English combines the study of rhetoric and literature. Students read and write essays to master various structural forms and methods of argumentation. Students are exposed to a variety of rhetorical methods of composition and are taught the distinct difference between composition and revision. Literary analysis includes both classical and contemporary works. The specific purpose of Senior English is to prepare students to succeed in English 101 and 102 at the university level and we employ college level textbooks and materials.

*This class meets four times a week*

### **Honors English Seminar [257]**

*Credit: 1.00*

Prerequisites: Senior status. An application is required for admission into Honors English Seminar. See the Seminar instructor or your guidance counselor for an application. Note deadlines. Qualification based on Departmental criteria. The Seminar student must be available for attending a few lectures, presentations and performances outside of class time.

Description: The Honors Senior English Seminar is concerned with creative growth and is based on the assumption that the act of thinking and creating makes living enjoyable and worthwhile. The Seminar encourages the student to recognize his individual viewpoint and to value the process of his own intellectual growth. The teacher serves as a guide and resource for those engaged in discussing and grappling with the complex issues of their culture in a spirit of collaboration. The course is concerned with examining significant works of contemporary literature and other art forms. In addition, the student presents a Seminar Project at the end of the year, one which has engaged his interest and concentration for several months.

*This class meets three times a week. This class meets three times a week.*

## Foreign Language Department

*Three full credits of the same Foreign Language are required for graduation.*

### **Latin 1 [312]**

*Credit: 1.00*

Description: The first Latin course provides students with a solid grounding in Latin grammar, syntax, and vocabulary. They will use this new knowledge to read simple Latin texts about Roman history and mythology. Students will broaden their English vocabulary and deepen their understanding of the way language works. They will also gain an understanding of Classical civilization that will enrich their knowledge of literature, history, philosophy, theology, and art.

### **Honors Latin 2 [313]**

*Credit: 1.00*

Prerequisite: An average of 90 or higher in Latin 1 plus teacher recommendation.

Description: The curriculum of Honors Latin 2 will be essentially identical to that of Latin 2. The expectations of the teacher will be heightened and the process accelerated.

### **Latin 2 [314]**

*Credit: 1.00*

Prerequisite: Latin 1

Description: Latin 2 begins with a thorough review of material from Latin 1 and continues with the introduction of more complicated grammatical constructions. This new material will be reinforced by the reading of Latin texts detailing the culture and daily life of the Roman Empire. Later in the year the students will first begin to read authentic, classical Latin.

### **Honors Latin 3 [315]**

*Credit: 1.00*

Prerequisite: An average of 85 or higher in Honors Latin 2 or an average of 90 or higher in Latin 2 plus teacher recommendation in both.

Description: The curriculum of Honors Latin 3 will be similar to that of Latin 3. The teacher's expectations will be heightened and the progress accelerated. In addition, Latin 3 Honors students will produce artistic translations and compositions in Latin.

### **Latin 3 [316]**

*Credit: 1.00*

Prerequisite: Latin 2

Description: Students in Latin 3 will continuously reinforce previously acquired syntax, grammar, and vocabulary as they become familiar with the Golden Age of Latin literature. Students will gain more experience understanding and interpreting authentic, Classical Latin. Authors read will include Plautus, Terrence, Livy, Catullus, Cicero, Horace, and Ovid.

### **Honors Latin 4 [317]**

*Credit: 1.00*

Prerequisite: An average of 85 or higher in Honors Latin 3 or an average of 90 or higher in Latin 3 plus teacher recommendation in both.

Description: Honors Latin 4 is given over completely to a reading and studying of ancient Roman authors and their culture through their literature: prose, poetry, drama. Students who enroll in Latin 4 will have a comfortable grasp of the Latin language, having already studied Latin for at least three years. This course will be offered as an independent study, seminar-style course. It will not meet everyday but at a frequency determined by the teacher.

### **Spanish 1 [320]**

*Credit: 1.00*

Description: This course is for students who have had no prior experience in Spanish. Emphasis is on building everyday vocabulary while the student is introduced to basic grammar and sentence structures. During the second half of the course the students expand their vocabulary and grammar through listening, speaking, reading, and writing exercises. Cultural topics include holidays, food, family and

conventional greetings. Emphasis is placed on oral production and comprehension of common vocabulary in everyday situations.

### **Spanish 1 [322]**

*Credit: 1.00*

Description: This course is designed for students who have had some experience in the language but not enough to study Spanish 2. The class reviews Spanish 1 vocabulary and grammar and continues to develop and expand their vocabulary and grammar throughout the year through listening, speaking, reading and writing exercises. Students also study the culture of various Hispanic countries. Emphasis is placed on oral production and comprehension with students producing written dialogues and projects. With a solid background in basic Spanish, many students will be able to place into Spanish 2 Honors.

### **Honors Spanish 2 [323]**

*Credit: 1.00*

Prerequisite: An average of 90 or higher in Spanish 1 plus teacher recommendation.

Description: The curriculum of Honors Spanish 2 will be essentially identical with that of Spanish 2. There will be additional projects, i.e. video presentations, skits, family albums, cultural food exchanges, etc. that will further develop the students' language skills. The course will be quantitatively more intense in terms of grammar skills, speaking, reading, and listening skills. The expectations of the teacher will be heightened and the progress accelerated.

### **Spanish 2 [324]**

*Credit: 1.00*

Prerequisite: Spanish 1

Description: A Spanish 2 student looks into the past through descriptions of his childhood and telling stories he remembers. Vocabulary expands to include comparisons, animals, historic events, cars and drawings of the city, the country, geographical descriptions and the house. Students build on their previously learned verb tenses. More in-depth work is done with the past tenses. Students make presentations of 2-3 minutes in Spanish and expand their reading and writing skills. Students continue to look at the culture of Mexico, Spain and other Hispanic countries.

### **Honors Spanish 3 [325]**

*Credit: 1.00*

Prerequisite: An average of 85 or higher in Honors Spanish 2 or an average of 90 or higher in Spanish 2 plus teacher recommendation.

Description: The curriculum of Honors Spanish 3 will be essentially identical with that of Spanish 3. The approach will be quantitatively more intense, in terms of grammar skills, speaking, reading, and listening skills. The expectations of the teacher will be heightened and the progress accelerated. As this is a preparatory course for Advanced Placement, students should be prepared to study challenging grammar points in detail.

### **Spanish 3 [326]**

*Credit: 1.00*

Prerequisite: Spanish 2

Description: The Spanish 3 student is on the threshold of holding spontaneous conversations using several categories of everyday vocabulary. The year begins with a thorough review of the verb tenses and special uses combined with longer oral and written discourses. Students learn to talk about real and future actions in several situations. They talk about history and culture of Hispanic countries, particularly Spain and Mexico, their own future, arts and crafts, etc.. More stories and movies in the target language are employed in class.

### **AP Spanish-Language [327]**

*Credit: 1.00*

Prerequisite: An average of 85 or higher in Honors Spanish 3 plus an interview and recommendation by the AP instructor. In some cases students with an average of 92+ in Spanish 4 Conversation can be accepted into the AP class with instructor approval.

Description: The Advanced Placement Spanish Language course will emphasize the use of language for active communication. The course objectives are:

the ability to understand spoken Spanish in various contexts;

development of a Spanish vocabulary sufficiently ample for reading newspaper and magazine articles, literary texts, and other nontechnical writings without dependence on a dictionary.

the ability to express oneself in Spanish both in speech and in writing, coherently, resourcefully, and with reasonable fluency and accuracy.

Course content will reflect intellectual interests shared by the students and the teacher (arts, current events, literature, sports, etc.) Materials will include audio and video recordings, films newspapers, and magazines.

#### **Spanish 4 [328]**

*Credit: 1.00*

Prerequisite: Spanish 3

Description: A total immersion Spanish class open to students who have completed Spanish 3 and who wish to further develop their speaking skills. This class will include an overview of grammar necessary to converse in good form on various topics including travel, housing, shopping, family, television, sports, cars, health, art, computers and business. Listening comprehension and vocabulary building will be emphasized. Recommended for juniors who plan to take AP Spanish.

*This class meets four times a week*

#### **Honors Spanish 4 [329]**

*Credit: 1.00*

Prerequisite: Spanish 3 Honors or recommendation from Spanish 3 teacher.

Description: Concentration on discussion of current issues and events, spontaneous conversation and development of advanced speech patterns. Students will do extensive readings from the Internet, newspapers and literature. During the fall semester, students will review for the SAT II Test in Spanish.

*This class meets four times a week*

#### **Spanish 2 Heritage Learner [330]**

*Credit: 1.00*

Prerequisite: Recommended for students who are heritage/bilingual with the need to accelerate grammar and oral skills. Interview and recommendation by the former instructor.

Description: This class is offered for students who are heritage or native speakers. A heritage student comes from a home where Spanish is the first language. Heritage learners have learned language skills at home or outside of school. Spanish 2 HL is offered for students who have receptive and productive skills in Spanish. This course will allow students to express themselves in a manner proficient of native Spanish skills and be able to handle conversations outside of classroom. Students are expected to share opinions, converse about any topic, and to present projects in Spanish. Course content includes: essential reading, everyday conversations, pronunciation/dictation skills, analysis of grammar, writing skills, ability to express opinions and hold advanced conversations in Spanish. Evaluation of cultural aspects and heritage traditions will be studied through film, media, projects, dialogues. Recommended for students who are heritage/bilingual with the need to accelerate grammar and oral skills.

#### **Spanish 3 Heritage Learner [331]**

*Credit: 1.00*

Prerequisite: Recommended for students who are heritage/bilingual with the need to accelerate grammar and oral skills. Bilingual Spanish student or has taken Spanish 2 HL course, plus an interview and recommendation by the former instructor. In some cases students with intermediate to high Spanish reading, writing, and speaking skills can be accepted into the Spanish 3 HL class with instructor approval.

Description: This class is offered for students who are heritage or native speakers. A heritage student comes from a home where Spanish is the first language. Heritage learners have learned language skills at home or outside of school. Spanish 3 HL is offered for students who have receptive and productive skills in Spanish. This course will allow students to express themselves in a manner proficient of native Spanish skills and be able to handle conversations outside of classroom. Students are expected to share opinions, converse about any topic, and to present projects in Spanish. Course content includes: essential reading, everyday conversations, pronunciation/dictation skills, analysis of grammar, writing skills, ability to express opinions and hold advanced conversations in Spanish. Evaluation of cultural aspects and heritage traditions will be studied through film, media, projects, dialogues.

**French 1 [332]**

*Credit: 1.00*

Description: This course is for students who have had little or no formal instruction in French. Emphasis is on building everyday vocabulary while the student is introduced to basic grammar and sentence structures. Also emphasis is placed on early pronunciation habits and phonetics. Students study the culture of France and other French-speaking countries. As the year progresses the students work on expanding their knowledge through listening, speaking, reading, and writing exercises. Emphasis is placed on oral production and comprehension with students producing written dialogues and projects.

**Honors French 2 [333]**

*Credit: 1.00*

Prerequisite: An average of 90 or higher in French 1 plus teacher recommendation.

Description: The curriculum of Honors French 2 will be essentially identical with that of French 2. There will be additional projects, i.e. video presentations, skits, family albums, cultural food exchanges, etc. that will further develop the students' language skills. The approach will be quantitatively more intense in terms of grammar skills, speaking, reading and listening skills. The expectations of the teacher will be heightened and the progress accelerated.

**French 2 [334]**

*Credit: 1.00*

Prerequisite: French 1

Description: A French 2 student looks into the past through descriptions of his childhood and telling stories he remembers. Vocabulary expands to include comparisons, animals, historic events, the city, the country, geographical descriptions and the house. Students make presentations of 2-3 minutes in French and expand their reading and writing skills. Students also continue to look at the culture of the Francophone world.

**Honors French 3 [335]**

*Credit: 1.00*

Prerequisite: An average of 85 or higher in Honors French 2 or an average of 90 or higher in French 2 plus teacher recommendation in both.

Description: The curriculum of Honors French 3 will be essentially identical with that of French 3. The approach will be quantitatively more intense, in terms of grammar skills, speaking, reading and listening skills. The expectations of the teacher will be heightened and the progress accelerated.

**French 3 [336]**

*Credit: 1.00*

Prerequisite: French 2

Description: The French 3 student is on the threshold of holding spontaneous conversations using several categories of everyday vocabulary. This year begins with a thorough review of verb tenses used in past studies. Students build on past experience for longer oral and written discourses. Students learn to talk about real life situations and future actions. They talk about history and geography of France and French-speaking countries, their own future, arts, etc.. More stories and movies in the target language are employed in class.

**Honors Advanced French [337]**

*Credit: 1.00*

Prerequisite: An average of 85 or higher in Honors French 3 or an average of 90 or higher in French 3 plus teacher recommendation in both.

Description: Students are challenged to use French language skills in a total immersion situation. Students are taught to write creatively and critically as well as read original texts in the target language. Vocabulary building is emphasized in preparation for discussions, debates and reports on a myriad of topics including current events as well as French culture, literature and art. Advanced students also undergo a thorough review of French grammar expanding into more detailed grammatical nuances than before.

*This class meets four times a week.*

**Intro to Ancient Greek Language & Culture [341]**

*Credit: 1.00*

Prerequisite: Completion of the 3 year foreign language requirement.

Description: This year long course will provide students with a solid grounding in Ancient Greek grammar, syntax, and vocabulary. They will use this new knowledge to read simple Greek texts including Aesop's fables and the New Testament. Students will also study ancient Greek civilization including athletics, architecture, religion, military leaders, and art. Research presentations, projects and various media will supplement language study.

*This class meets four times a week*

## Physical Education Department

*The two credit Physical Education requirement must include one semester of Health (.5 credit) during Freshman year. The remaining one and one half (1.5) credits may be earned during the Freshman, Sophomore, Junior and/or Senior. Effective with the class of 2013 the Physical Education requirement will include .5 credit of Health and 1 credit of Physical. Education.*

### **Physical Education [various 400 courses]**

*Credit: 0.50*

Prerequisites: None.

Description: Physical Education is a Pass/Fail course. Students are allowed to participate in a wide variety of activities with an emphasis on fun, movement and stress release. Once a year all students are administered the President's Physical Fitness Test. This testing allows the instructor to evaluate the student in comparison to other students on the national level. Student progress may be charted from year to year.

*This class meets four days a week.*

### **Health [411]**

*Credit: 0.50*

Prerequisites: Freshman status.

Description: Health is combined with physical education that strives to develop the total individual, physiologically, mentally, and spiritually. Health strives to keep the students abreast of the ever-changing physiological challenges that they will face as they progress through life. Each student is encouraged by repetition to become knowledgeable of the responsibilities they have to themselves and one another, and the benefits and needs of accepting those responsibilities necessary for their well-being and that of our society.

*This class meets two days a week for one year.*

## **Social Studies Department [500]**

*The four credit Social Studies requirement is must include World History, United States History, Social and Public Policy, Government and Economics.*

### **AP World History [513]**

*Credit: 1.00*

Prerequisites: Sophomore status; Qualification based on the following AP placement criteria:

1. Students selecting AP World History must have achieved an overall GPA of 90. The student must also have a minimum of 90 or better in freshman English.
2. An evaluation on a rating scale from the freshman English teacher will be obtained. To be ranked, a student must receive a rating of at least four or higher (on a five point scale);
3. The selection factor on which students will be ranked is a combination of GPA and teacher recommendation ratings.
4. Students taking AP World History understand they are agreeing to take the AP test administered in the Spring.

Description: AP World History follows the overall scope, sequence and format of the World History course, but with several significant variations. The AP course is designed to aid the student to achieve the greatest possible success on the AP World History examination. The course moves at a much faster pace than the regular class and with greater reliance on students' abilities to acquire the "basics" without additional classroom reinforcement or explanation. The AP course will examine particular issues, events, and historical forces in much greater detail than in the standard course.

### **World History [514]**

*Credit: 1.00*

Prerequisites: Sophomore status

Description: This is a two semester survey of World History that follows the development of civilizations around the world from prehistory to the present. Students will explore how human-geographic relationships, political and social structures, economics, science and technology, and the arts have influenced life in these civilizations. Students will also focus on major changes in World History such as the development of agriculture, spread of democracy, rise of the nation states, the industrial era and the issues and conflicts of the 20th century.

### **AP United States History [524]**

*Credit: 1.00*

Prerequisites: Junior status; Qualification based on the following AP placement criteria:

1. Students selecting AP U.S. History must have achieved an overall GPA of 90 with a minimum cumulative Social Studies GPA of 85;
2. An evaluation on a rating scale from the sophomore English and Social Studies teachers will be obtained. To be ranked, a student must have an average teacher assessment of four or higher (on a five point scale);
3. The selection factor on which students will be ranked is a combination of GPA and teacher recommendation ratings.
4. Students taking AP US History understand they are agreeing to take the AP test administered in the Spring.

Description: This course is structured to prepare students to achieve the greatest possible success on the AP U.S. History Exam in the Spring . This course is a survey in United States history from the early days of exploration to the USA's postwar superpower status. Its purpose is to help students gain insight and demonstrate an appreciation for the American phenomenon both internationally and domestically. Emphasis is placed on the historical, social, political, economic and intellectual issues, and how they relate to the maturation and development of the country. Success in this course will require students to integrate and apply knowledge gained from the synthesis of thorough lecture notes, participating in class

discussion, completing all assigned activities, text readings and outside readings; independent initiative, motivation and dedication to academic success are assumed.

### **United States History [526]**

*Credit: 1.00*

Prerequisites: Junior status

Description: This is a two semester survey of United States history from its New World beginnings through the major events of the twentieth century and into the twenty first. Students will investigate the United States' struggle to define and practice its democratic ideals throughout its development and refinement. Students are required to write a major research paper and make use of interpretive and analytical skills.

### **AP Government [537]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History. Qualification based on the following AP placement criteria:

1. Students selecting AP Government and AP Economics must have achieved an overall GPA of 90 with a minimum cumulative Social Studies GPA of 85;
2. An evaluation on a rating scale from the junior English and Social Studies teachers will be obtained. To be ranked, a student must have an average teacher assessment of four or higher (on a five point scale);
3. The selection factor on which students will be ranked is a combination of GPA data and teacher recommendation ratings;
4. Students taking AP Government understand they are agreeing to take the AP test administered in the Spring.

Description: This one semester college level course in United States government and politics brings critical perspective to the study of general concepts used to interpret United States politics and the analysis of specific case studies. Through lecture, discussion, original source readings, focused research, and simulations, the course allows students to understand and appreciate the various institutions, groups, beliefs, and ideas that make up the United States' political reality. The AP course is designed to aid the student to achieve the greatest possible success on the AP Government examination.

*This class meets four days a week.*

### **Government [538]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and US History.

Description: This one semester course in Government introduces students to the structure and function of the American governmental system along with the nature of American politics. An investigation of the Constitution and its development opens the way to focus on how various governmental officials achieve and wield power. Campaigning and elections, policy making, and the media's role in politics are given explicit attention. How the three branches of the national government work together through balance of power and the checks and balances system, how the Congress makes law, the President executes law and the courts review law are all investigated thoroughly to enlighten students about the American government's responsibility to citizens and their own social and civic responsibility.

*This class meets four days a week.*

### **AP Macroeconomics [547]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History. Qualification based on the Departmental AP placement criteria as stated for AP Government.

Description: This one semester college level course is an analysis of the economy as a whole. Students examine the organization and function of the economy through lectures, readings, and focused research projects demanding evaluation and synthesis. Topics covered include money and banking, national income, public finance, and international linkages. The AP course is designed to aid the student to achieve the greatest possible success on the AP Economics examination.

*This class meets four days a week.*

### **Economics [548]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester course is taken in the senior year. Through lecture, discussion, research paper, evaluative essays, and student presentations, students demonstrate mastery of essential economic concepts such as the operation of markets, national income, and money and banking. Special consideration is given to an extension of socio-economic issues and social justice issues.

*This class meets four days a week.*

### **International Relations [557]**

*Credit: 0.50 Elective*

Prerequisites: Senior status; completion of World and U.S. History.

Description: International Relations as a field is the study of interactions between countries. Over time, international relations scholars have developed theories or frameworks for understanding the things they observe in real life. But these theories are only significant if they can explain the actual events that occur in international relations. As a result, the course will explore both theory and how it applies to real world policy issues. Issues discussed include proliferations of weapons of mass destruction, terrorism, free trade, US Russia relations, Afghanistan, Arab-Israeli conflict, Latin America-US relations, global climate change among others current issues facing the United States in its interactions with the rest of the world.

*This class meets four times a week.*

### **Contemporary Issues in Social Studies [558]**

*Credit: 0.50 Elective*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This is a one semester senior level elective designed to explore today's issues and conflicts, particularly at the national level. It is a self-directed participatory course with seminar style discussions and debates. Use is made of current articles, events, documentaries, videos, and other pertinent information.

*This class meets four times a week.*

### **AP Comparative Politics [565]**

*Credit: 0.50 Elective*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester elective provides an intensive study of institutions, political and social structures, populations, beliefs, and ideas that constitute political life and activity in six exemplary countries, including Great Britain, Iran, Russia, China, Nigeria and Mexico. Students will master the comparative method of political analysis that will enable them to uncover fundamental principles of political organization through comparison of political systems. The course will also explore differences in political institutions, regime types as well as economic systems.

*This class meets four days a week.*

### **Global Studies – The Middle East, Africa and Latin America [567]**

*Credit: .50 Elective*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester elective focuses on the development and culture of specific regions of the non Western world in attempt to expose the student to the richness and complexities of the histories and cultures of these civilizations.

*This class meets four times a week.*

### **Global Studies – China, Korea, Japan and South Asia [568]**

*Credit: .50 Elective*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester elective focuses on the development and culture of specific regions of the non Western world in an attempt to expose the student to the richness and complexities of the histories and cultures of these civilizations.

*This class meets four times a week.*

### **The Collapse of Civilizations [570]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester elective course investigates questions such as: "What is more haunting than the specter of a civilization's collapse—the abandoned temples of Angkor Wat, the Mayan cities

overgrown by jungle, or the somber vigil of Easter Island's statues? Who hasn't looked at such ruins and wondered, could the same things happen to us?" Or, for that matter, is it already happening to us? Such questions are exactly what this course sets out to explore. What makes a society fail? What makes it succeed and become sustainable? What are the prospects for America's future? Indeed, for civilization's future? And is it even plausible to "know" or accurately speculate about such things? To address such questions, students will thoroughly read and analyze Collapse by Pulitzer-prize winning author Jared Diamond as well as other sources and readings that will compliment this main text.

*This class meets four days a week.*

### **Psychology [571]**

*Credit: 0.50 Elective*

Prerequisite: Senior status; completion of World and U.S. History.

Description: This one semester elective course will teach students to apply approaches such as the cognitive, behavioral, biological, psychoanalytic, and humanistic theories to examine people and their responses to the world in which we live. Students will also examine topics such as motivation, emotion, theories of learning, definitions of abnormality, psychological disorders, and approaches to treatment. Additional areas to be covered include social psychology, group dynamics, conformity, theories of personality, and career opportunities in the field of psychology.

*This class meets four days a week.*

### **History through Popular Media [572]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester elective course is interested in the fact that many people in current US society get their history through media outside of print. That is, they don't read history so much as view it or play it. History comes to them in an ubiquitous flood of Hollywood films, History Channel docu-wars, evening broadcasts, and video games. Thus, a question arises: how valid are these media for conveying the past? Even more specifically, what about history, if anything, can be legitimately learned from such media? How reliable are these sources and by what criteria should such sources be scrutinized, criticized, and evaluated in terms of conveying the past to the present and future?

This course is for students interested in the way alternative media, particularly film, conveys history. Students can expect to develop critical thinking and writing skills, as well as some sense of the larger controversies surrounding how the past can and should be communicated.

*This class meets four days a week.*

### **Slavery, Civil War and Reconstruction [574]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester course is an in-depth examination of the critical challenge of 19th century America, the attempt to resolve those seemingly intractable issues of slavery, race, the Constitution, and the meanings of freedom and democracy as they evolved in American development. Specifically, the course will examine the origins of American slavery, the role slavery played in colonial development, and how slavery became a part of the U.S. Constitution. It will also study the emergence of the anti-slavery and abolition movements. The development of sectionalism and its relationship to slavery will be explored, and then the causes of the Civil War. The course will then explore the Civil War, chronicling the gradual development of Union power leading to the Northern victory. The course will then examine the tragedy of Reconstruction, the attempts to reunify the nation and resolve the racial divide, and the reemergence of white supremacy through brute force and loss of national will.

*This class meets four days a week.*

### **Religions of the Axial Age: An Approach to the World's Religions [576]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester elective course is interested in the years 800-200 BCE as comprising one of the most creative and influential eras in world history. The German philosopher Karl Jaspers termed this epoch "The Axial Age" to indicate its pivotal importance in the evolution of human thought. Around the globe sages and moralists such as: Zoroaster, Buddha, Confucius, Jeremiah, Socrates and Aristotle all

grappled with novel ideas about the nature of humanity, the world, and ultimate reality. By setting these traditions and thinkers in juxtaposition, we are able to see more clearly the nature of the questions with which they struggled and appreciate the similarities and the differences of their solutions. We can also understand how their ideas have determined theological and religious thought and practices in our day.

*This class meets four days a week.*

### **Civil Rights, the Great Society and Vietnam: The Tumultuous Years [578]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester course attempts an in-depth examination of the tumultuous years of the last half of the 20th century in America. Starting with a brief examination of American society in 1950, the course will study the Civil Rights Movement through the 50s, 60s and into the 70s. It will also trace the emergence of the Great Society programs of the 60s, the beginnings of the Vietnam War and the gradual escalation of American involvement, and the rise of the anti-war and counterculture movements. The pivotal year of 1968 will draw special attention, and the course will conclude with the developments of the early 70s and the end of the Nixon presidency.

*This class meets four days a week.*

### **The Historical Concept of War: Theory, Practice and Applications [580]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

Description: This one semester course examines the concept of war from several historical perspectives. First, students will examine "Just War" theory to understand the arguments for war as a moral, or immoral, exercise of organized violence to achieve political ends. The course will then present different approaches to strategy, stressing Clausewitz's principles of war as outlined in *Das Krieg*, Machiavelli's *The Prince*, and U.S. Army Field Manual 100-5. The instructor will present an analysis of a specific war, applying the concepts of just war and military strategy. Students will then, in groups, produce a similar analysis of a war, and present that analysis to the class. Students must be prepared for this extensive group work and group presentation, as a major part of the course grade will be derived from this work.

*This class meets four days a week.*

### **Mass Media and Cultural Studies [582]**

*Credit: 0.50*

Prerequisites: Senior status; completion of World and U.S. History.

This one semester senior level course will introduce students to cultural and mass media studies. The course will emphasize the processes, elements, uses, and impacts of mass media including history, development, operation, and cultural effects of all types of mass media including books, newspapers, magazines, motion pictures, radio, television, sound recordings, computer media, and internet based media. The course will introduce students to various forms of cultural and media criticism methods including describing, interpreting, and judging media messages utilizing various critical theories. The curriculum is designed to develop students writing, critical thinking, speaking, and research skills in the context of mass media studies.

*This class meets four days a week.*

## Mathematics Department [600]

The four year Math requirement may be fulfilled with courses listed in this section. All students must receive credit for Algebra 1, Geometry, and Algebra 2. All courses require a graphing calculator. Incoming freshmen will be placed in honors or advanced level math classes based on their performance on the ISEE Admissions Exam and the Algebra Skills Assessment Exam.

Transfer students will be placed in an appropriate level math class based on their previous transcript and performance on the Algebra Skills Assessment Exam.

### Honors Algebra 1 [611]

*Credit: 1.00*

Prerequisites: Scores above the 85%ile on both the Math Achievement and Quantitative Aptitude portions of the entrance exam.

Description: Topics covered are the same as Algebra 1. Differences include time allotted each section, types of presentations, depth of understanding for some concepts, extended use of graphing calculators and more challenging tests and quizzes. Honors students are expected to finish the course with a more in depth understanding and the ability to be more independent in dealing with new material.

### Algebra 1 [612]

*Credit: 1.00*

Prerequisites: None.

Description: The first year Algebra course is designed to provide a link between the mathematics which students have already studied and the mathematics courses which they will study in their high school years. Topics include a brief review of algebraic terms, simple equations, and real numbers; other topics concern solving equations, problem solving, factoring, linear systems, functions, inequalities, rational numbers, quadratic functions, and the graphing of linear and quadratic functions both with and without a graphing calculator.

### Honors Advanced Algebra 1 [619]

*Credit: 1.00*

Prerequisites: satisfactory completion of the Algebra Skills Assessment.

Description: The course is intended for the incoming freshman who has considerable facility with but not mastery of Algebra I. Topics covered include advanced topics in Algebra I such as rational expressions and equations, radical expressions and equations, and introduction to functions with an emphasis on quadratics combined with Algebra II topics of higher degree polynomials, advanced factoring, non-linear systems of equations, and matrix operations.

### Honors Geometry [621]

*Credit: 1.00*

Prerequisites: Completion of Algebra 1. Students must have a second semester average of at least 85% in Honors Algebra 1 or 95% in Algebra 1 and the teacher's recommendation.

Description: This course covers all the topics of Geometry but from an approach heavily centered on the development and use of deductive reasoning. Students are expected to develop conjectures related to the various topics and to prove the same as theorems before using them in related exercises.

### Geometry [622]

*Credit: 1.00*

Prerequisites: Algebra 1.

Description: This course develops the thinking skills of the students. These skills are: reasoning, analysis, interpreting, recall and transfer, classification, spatial perception, synthesis, and application of concepts. The course emphasizes proof and problem solving. Content areas include properties of triangles, polygons and circles, similarity, trigonometry, areas of plane figures, and surface areas and volumes of solids, and constructions of figures. Coordinate and transformational approaches to geometry are also taught.

### Honors Algebra 2/Trigonometry [627 and 631]

*Credit: 1.00*

Prerequisites: Second semester average of at least 85% in Geometry or 80% in Honors Geometry as well as second semester averages of at least 85% for Honors Algebra 1 or 90% for Algebra 1 and the current teacher's recommendation.

Description: In addition to the topics covered in Algebra 2 the course also includes trigonometry. Assignments and tests include more challenging problems and more creative solution techniques.

### **Algebra 2 [632]**

*Credit: 1.00*

Prerequisites: Completion of Algebra 1 and Geometry.

Description: Topics include solution techniques for a variety of linear and quadratic equations and inequalities and systems, using both algebraic analysis and matrix algebra on the graphing calculator. This is to be followed by analysis and simplification of exponential, logarithmic, rational, polynomial (including those of degree 3 and greater) and irrational functions. Finally the set of complex numbers, the conic sections, series and sequences and probability and statistics are introduced. Students are encouraged to develop a diverse set of problem solving skills, including technological approaches, through work on numerous application problems in each section.

### **Honors Advanced Algebra 2/Trigonometry [639]**

*Credit: 1.00*

Prerequisites: Junior standing and second semester average of at least 85% in Honors Geometry, as well as second semester averages of at least 80% for Honors Advanced Algebra 1, 90% for Honors Algebra 1, or 95% for Algebra 1 and the current teacher's recommendation.

Description: This course is designed as preparation for a level of AP Calculus in the student's senior year. In addition to the topics covered in Algebra 2 the course also includes trigonometry, as well topics from precalculus of function analysis, mathematical induction, sequences, series, and limits. Assignments and tests include more challenging problems and more creative solution techniques.

### **Applied College Mathematics [648]**

*Credit: 1.00*

Prerequisites: Completion of Algebra 1, Geometry and Algebra 2 and Senior standing.

Students who have completed Precalculus are not eligible for this course.

Description: The objectives of the course are:

- 1) to provide students with the necessary background in the quantitative techniques in order to better understand and appreciate the courses normally taken in undergraduate training
- 2) to lay the foundation for more advanced courses, such as Statistics, Precalculus, operations research and other entry level college classes.

The course emphasizes the use of basic algebraic operations to solve applications-oriented problems. The algebraic operations include systems of linear equations and matrices, functions and inequalities. Additional topics also include solving systems of linear equations, linear programming problems, basic concepts of probability, permutations and combinations, data analysis, and basic trigonometry. The use and knowledge of graphing calculators is emphasized.

*This class meets four times a week.*

### **AP Statistics [657]**

*Credit: 1.00*

Prerequisites: Completion of Algebra 1, Algebra 2 and Geometry. Students must have a GPA above 85.0 and second semester averages of 70% in Honors Precalculus, 75% in either Honors Algebra 2 or Precalculus, or 80% in Algebra 2.

Description: This course may be taken following Precalculus, concurrently with Calculus, or concurrently with Precalculus. The focus of the course is preparation for successful completion of the AP Statistics Exam. Topics are similar to those for Statistics with emphasis on those topics listed by the College Board.

*This class meets four times a week.*

### **Statistics [658]**

*Credit: 1.00*

Prerequisites: Completion of Algebra 1, Algebra 2 and Geometry. Second semester averages of 75% in Algebra 2, 70% in Honors Algebra 2, or 70% in Precalculus. This course can be taken concurrently with or following Precalculus.

Description: Topics include statistics, experimental design, data de the role of analysis, basic probability and probability distributions including binomial, geometric, Poisson, Chi-square and normal, sampling variability and distributions, estimation, confidence intervals, hypothesis testing, analysis of bivariate data, and linear regressions.

*This class meets four times a week.*

### **Honors Precalculus [665]**

*Credit: 1.00*

Prerequisites: Junior standing and completion of Geometry, Algebra 2. Students must have a second semester average of 85% in Honors Algebra 2/trigonometry or 95% in Algebra 2 and the teachers' recommendation.

Description: This course is designed as preparation for the BC level of AP Calculus in the student's senior year. In addition to the topics of Precalculus, this course includes mathematical induction, sequences, series, limits, limits of functions, and an introduction to the derivative and its applications.

*This class meets five times a week.*

### **Honors Precalculus [667]**

*Credit: 1.00*

Prerequisites: Senior standing and completion of Algebra 1, Geometry, Algebra 2. Students must have a second semester average of 85% in Honors Algebra 2/trigonometry or 95% in Algebra 2 and the teachers' recommendation.

Description: This course is designed as preparation for a rigorous course in Calculus. In addition to the topics of Precalculus, this course includes mathematical induction, sequences, series, limits, limits of functions, and an introduction to the derivative and its applications.

*This class meets four times a week.*

### **Precalculus [668]**

*Credit: 1.00*

Prerequisites: Completion of Algebra 1, Geometry, and Algebra 2 and Senior standing.

Second semester averages of at least 75% in Honors Algebra 2 or 80% in Algebra 2.

Description: The main objective of this course is to build a solid mathematical foundation in preparation for the student's entry into college level courses. The course emphasizes the study of algebraic, exponential, logarithmic and trigonometric functions and their applications; complex numbers are also studied. The emphasis will be on function analysis, mathematical reasoning and problem solving using appropriate current technology.

*This class meets four times a week.*

### **Precalculus [670]**

*Credit: 1.00*

Prerequisites: Completion of Geometry, and Algebra 2 and Junior standing.

Description: The main objective of this course is to prepare students to take AP Calculus in their senior year. The course emphasizes the study of algebraic, exponential, logarithmic and trigonometric functions and their applications; complex numbers are also studied. The emphasis will be on function analysis, mathematical reasoning and problem solving using appropriate current technology.

*This class meets five times a week.*

### **AP BC Calculus [677]**

*Credit: 1.00*

Prerequisites: Completion of Algebra 1, Algebra 2 and Geometry, Precalculus. Students must have a second semester average of at least 85% in Honors Precalculus or 95% in Precalculus and the teacher's recommendation.

Description: The focus of the course is preparation for successful completion of the AP BC Calculus Exam. Topics are presented using graphical, numerical, algebraic, and verbal approaches with an emphasis on the use of appropriate technology. Students who successfully complete this course and the AP exam are able to place out of one or two semesters of college calculus.

*This class meets five times a week.*

## **AP AB Calculus [678]**

*Credit: 1.00*

Prerequisites: Completion of Algebra 1, Algebra 2 and Geometry; one of the following must be true:

1. Honors Precalculus students: a second semester average of at least 75% and the teacher's recommendation;
2. Precalculus students: a second semester average of at least 80% and the teacher's recommendation;

Description: This is an introductory course in differential and integral Calculus with elementary functions. The focus of the course is preparation for successful completion of the AP AB Calculus Exam. Definitions and theorems are precisely stated; proofs of theorems are often deferred to a later course. Topics are presented using graphical, numerical, algebraic, and verbal approaches with an emphasis on the use of appropriate technology. Students who successfully complete this course and the AP exam are able to place out of one semester of college calculus.

*This class meets four times a week.*

## Science Department [700]

*The four credit Science requirement must include Biology, Chemistry, Physics.*

### **Honors Biology [711]**

*Credit: 1.00*

Prerequisites: Student achievement of better than the 80%ile on the Reading Comprehension and Verbal Aptitude portions of the entrance exam.

Description: This course covers the same material presented in Biology, but in greater depth. Testing in Honors Biology includes a larger number of application questions on tests and on homework. In the spring semester, an insect field project is required of all students.

### **Biology [712]**

*Credit: 1.00*

*Prerequisites: None.*

Description: This course entails the study of molecules, cells, genetics, evolution, microbiology, botany, invertebrates, vertebrates, human biology and ecology. In order to understand the application of these concepts, presentations are made to the students using graphic animations and computer presentations. Students are required to have lab on these topics once a week. In the spring an insect field project is required of all students.

### **AP Biology [717]**

*Credit: 1.00*

Prerequisites: Senior status; 90 cumulative GPA and above. Students will be expected to take the AP Biology test.

Description: This course is taught at the same level of a major's class during the first year of college. All of the same topics are covered that are covered in the Introductory Biology course but to a greater depth. Some of the topics that are investigated at this level are cellular respiration, photosynthesis, Mendelian and biochemical genetics, and evolution. There is also an intensive study of human anatomy in comparison to the fetal pig. Since this class is taught at the college level, grades are derived from tests only. This is a dual enrollment course with Brookhaven College, upon completion of course, students will receive 8 hrs. of science elective credit.

*This class meets five days a week.*

### **Honors Chemistry [723]**

*Credit: 1.00*

Prerequisites: Sophomore status; 93% cumulative GPA plus 90% average or better in second semester Algebra 1 or 85% average or better in Honors Algebra 1, Honors Geometry or Geometry.

Description: This introductory chemistry course features fundamental topics in chemistry including: scientific measurement, atomic theory, the periodic table, bonding, nomenclature, reaction types, stoichiometry, gas laws, and solutions. Students learn to apply the principles of chemistry in order to make well-reasoned predictions, perform laboratory experiments, and answer scientific questions through calculation. Students in this course explore concepts from numerous branches of chemistry, including nuclear chemistry, electrochemistry, and organic chemistry. Honors Chemistry covers fundamental chemical knowledge, laboratory techniques, and mathematical analysis providing a thorough introduction to the field and preparation for the Advanced Placement Chemistry course. In the spring a molecule project is expected of all students.

### **Chemistry [724]**

*Credit: 1.00*

Prerequisites: Sophomore status

Description: This is an introductory Chemistry course. Topics covered in the first semester include such basic concepts as the names and symbols of elements, formulas of compounds, writing and balancing chemical equations, different kinds of chemical reactions, and calculations involving chemical quantities. Weekly laboratory experiments reinforce what is learned in lecture and small-group work. In the second semester, laboratory work is broadened as the student now has a working knowledge of basic chemical concepts and calculations. Topics covered in the second semester include electron energy levels, types

of chemical bonding, chemical periodicity, and the specific reactions of different groups of elements. In the spring a molecule project is expected of all students.

### **AP Chemistry [727]**

*Credit: 1.00*

Prerequisites: Senior status with a 90% cumulative GPA or above. Students will be expected to take the AP Chemistry test.

Description: The AP Chemistry course is designed to be the equivalent of the general chemistry course usually taken during the first college year. For some students, this course enables them to undertake, as freshmen, second-year work in the chemistry sequence at their institution or to register in other fields where general chemistry is the prerequisite. For other students, the AP Chemistry course fulfills the laboratory science requirement and frees time for other courses. Students in this course should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. The course should contribute to the development of the student's abilities to think clearly and to express his ideas, orally and in writing, with clarity and logic. This college course in general chemistry differs qualitatively from the usual first secondary school course in chemistry with respect to the kind of textbook (college level), the topics covered, the emphasis on chemical calculations and the mathematical formulation of principles, and the kind of laboratory work done by the students. Quantitative differences appear in the number of topics treated, the time spent on the course by students, and the nature and the variety of experiments done in the laboratory (a double laboratory period each week). The AP Chemistry course is designed to be taken only after the successful completion of a first course in high school chemistry and a second-year algebra course.

*This class meets five times a week.*

### **AP Physics B [735]**

*Credit: 1.00*

Prerequisites: This two semester course is open to junior and senior students. Juniors must have completed Honors Chemistry; have a cumulative 90% GPA and a 90% average in regular Math courses or 85% average in honors Math courses. Seniors must have completed Physics [736], have a cumulative 90% GPA and a 90% average in regular Math courses or an 85% average in honors Math courses. Concurrent enrollment in Honors Algebra II is required as a minimum. Concurrent enrollment in Pre-Calculus is recommended. Students enrolling are required to take the AP B Physics test at the end of the spring semester.

Description: This course provides a systematic development of the principles of physics by emphasizing problem solving and helping students develop a deep understanding of physics by emphasizing conceptual and quantitative aspects through interactive lectures, demonstrations, videos, and laboratory experiences. Topics covered in the first semester include one and two dimensional motion, Newton's laws, forces, vectors, gravity, momentum, work, energy, circular motion, rotation, temperature, heat, buoyancy, and thermodynamics. Second semester topics include static electricity, conductors, capacitors, dielectrics, electrical circuits, magnetic fields, waves, optics, atomic physics, and nuclear physics.

### **Physics [736]**

*Credit: 1.00*

Prerequisites: Junior status

Description: This is an introductory Physics course. Topics covered in the first semester include one and two dimensional motion, Newton's Laws, forces, vectors, gravity, momentum, work, and energy. In the second semester topics include wave motion, sound, light, electricity, and magnetism. Through interactive lecture, demonstrations, videos, and laboratory experiences, both conceptual and quantitative aspects of the material are emphasized. Students will be required to demonstrate their understanding of the topics covered through several course projects.

### **AP Physics C - Mechanics [737]**

*Credit: 1.00*

Prerequisite: This two semester course is open to seniors who have completed AP Physics B with a 90% or above. Concurrent enrollment in Calculus is required. Any exceptions must be approved by the teacher. Students are expected to take the AP Mechanics test at the end of the spring semester.

Description: This Calculus-based course is more analytical and intensive than AP Physics B. It places a strong emphasis on solving a variety of challenging problems as it develops a deep understanding of physics concepts. Guided inquiry learning is used to develop critical thinking skills. This course corresponds to the first year college course generally taken by students majoring in engineering or physics. Course topics include kinematics, Newton's laws of motion, work, energy, power, systems of particles, linear momentum, circular motion, rotation, oscillations and gravitation.

### **AP Physics C - Electromagnetism [739]**

*Credit: 1.00*

Prerequisite: This two semester course is open to seniors who have completed AP Physics B with a 90% or above. Concurrent enrollment in Calculus is required. Any exceptions must be approved by the teacher. Students are expected to take the AP Electromagnetism test at the end of the spring semester.

Description: This Calculus-based course is more analytical and intensive than AP Physics B. It places a strong emphasis on solving a variety of challenging problems. Physical principles are formulated using calculus and applied to solving a variety of physical problems. Guided inquiry learning is used to develop critical thinking skills. This corresponds to the first year college course generally taken by students majoring in engineering or physics. Course topics include electrostatics, conductors, capacitors, dielectrics, electric circuits, magnetic fields, Maxwell's equations, and electromagnetism

### **Astronomy - The Solar System [742]**

*Credit: 0.50*

Prerequisites: This one semester course is open to seniors with an 80% GPA or higher.

Description: The Solar System is a one semester course that is taught during the fall semester. The course is taught on a college entry level. The course covers the fundamental aspects of the solar system, theories of origin and evolution of the solar system, historical development of astronomical ideas including the celestial sphere, the motions of the planets, time keeping, elementary navigation, constellation identification, and telescope construction. The course also involves observing sessions in which optical and radio emissions of stellar bodies are recorded and analyzed. Students enrolling in the course are committing to one three hour evening observation session per month.

*This class meets four times a week.*

### **Astronomy - Stars and Galaxies [744]**

*Credit: 0.50*

Prerequisites: This one semester course is open to seniors with an 80% GPA or higher.

Description: Stars and Galaxies is a one semester science course that is taught during the spring semester. This course is taught on a college entry level. The course covers the historical development of astronomical ideas including the celestial sphere, basic properties of stars, stellar evolution, black holes, constellation identification, elementary navigation, use of optical spectra in the study of stellar bodies, and cosmological ideas. The course will also involve observing sessions in which optical and radio emissions of stellar bodies are recorded and analyzed. Students enrolling in the course are committing to one three hour evening observation session per month.

*This class meets four times a week.*

### **Anatomy & Physiology [745]**

*Credit: 1.00*

Prerequisites: This two semester course is open to seniors

Description: This class will introduce students to the anatomical structures and the physiological processes that make human life possible. Topics include: levels of organization in the human body, all of the human body systems (skeletal, muscular, and reproductive), metabolism and energetics, development and inheritance and medical terminology. This class is designed for students who are interested in health sciences such as medicine, nursing, nutrition, physical/occupational therapy, sports medicine, athletic training, exercise physiology, and general fitness. This course is taught at the same level of a non-major's class during the first year of college and includes a strong lab block with the fetal pig.

*This class meets four days a week.*

### **Behavioral Ecology [746]**

*Credit: 0.50*

Prerequisites: This one semester course is open to seniors.

Description: Behavioral Ecology is a one-semester course that will introduce students to the study of animal behavior by investigating how evolution, environment, and interaction with other organisms shape behavior. A major emphasis of the course will be to help students “demystify” behavior in both animals and humans by discussing the genetic and cellular processes that govern behavior. An organism’s behavior is determined by natural selection acting on genes that ensure survival and reproduction in particular ecological environments. Thus, the topics of this course will focus on survival and mating behaviors. Topics will include: how genes and environment affect behavior, learning and memory, feeding behavior, sexual selection and mating behavior, aggression, and social/cultural behaviors. Students will learn how to collect and analyze behavioral data by participating in individual and group activities in the laboratory. An emphasis is placed on students learning all steps of the scientific process by conducting individual research, analyzing their data, and presenting it at the end of the course. *This class meets four times a week.*

### **Introduction to Engineering [748]**

*Credit: 0.50*

Prerequisites: This one semester course is open to seniors.

Description: Introduction to Engineering is a one-semester course designed to be dynamic and comprehensive touching on many aspects of the engineering field including aeronautics, electrical, mechanical, civil, biomedical, and computer. Students will reinforce concepts with hands on labs using industry standard software. Central concepts are reinforced through design challenges including robot construction and bridge building. In addition, students will participate in site visits to various industries and engineering firms, including SMU, IBM, and Lockheed Martin. The goal of the course is to understand how components of our world function and interact and how to optimize their use in different situations, as well as understand the impact each aspect of engineering has on daily life.

*This class meets four times a week.*

### **Forensic Science [750]**

*Credit: 0.50*

Prerequisites: This one semester course is open to seniors.

Description: Forensic Science is a one-semester course based on college-level introductory criminalistics. It is designed to introduce evidence-collection, data recording and advanced scientific method for the purpose of investigating crime. Students will learn how to collect and collate data, how process physical, chemical and trace evidence and how to present findings in a standard accepted format. (Tentative field trips: UNT Forensic Science Dept, Dallas Police Dept.). Topics will include: history of forensic science, crime scene processing and evidence collection, physical evidence, chemical evidence and analysis and trace evidence processing. The main goal of the course is to understand how precepts of biology, chemistry and physics are used in the processing of crime scenes and to apply that knowledge to collect evidence, analyze data, present findings and defend a conclusion.

*This class meets four times a week.*

## Computer Science Department

*One credit of Computer Science is required for graduation.*

### **Technology Applications [811]**

*Credit: 0.50*

Prerequisites: None.

Description: All freshmen must take either Introduction to Computer Programming or Technology Applications. Technology Applications is a survey course of current technology topics. Students will be exposed to Microsoft Word, Excel and PowerPoint, image editing, sound editing, video editing, HTML, and programming.

### **Introduction to Computer Programming [813]**

*Credit: 0.50*

Prerequisites: None.

Description: All freshmen must take either Introduction to Computer Programming or Technology Applications. Intro to Computer Programming assumes no prior computer programming experience, but assumes computer literacy. Students will learn algorithm development and an Object Oriented approach to problem solving. The programming language will be Java.

### **Advanced Topics in Technology [835]**

*Credit: 0.50*

Prerequisites: Senior status; Technology Applications or Introduction to Computer Programming

Description: A course designed to bring together all students interested in pursuing a particular field of technology beyond what is taught at Jesuit. Each student is expected to supply his own mentor (to be approved by the teacher) in the 'real world' to gain experience and knowledge of the field of technology chosen. The student is expected to spend 30 off-campus hours with this mentor to successfully pass one of the course requirements.

### **AP Computer Science [845]**

*Credit: 1.00*

Prerequisites: Junior or Senior status; Technology Applications or Introduction to Computer Programming.

Description: This full-year course prepares the student to take the AP Computer Science A exam. The syllabus emphasizes problem solving, algorithm development, data structures, Java programming, Object Oriented Programming, and includes an AP Case Study. Students interested in the course are encouraged to consult the instructor. Detailed information about the AP Computer Science test is available at: <http://www.collegeboard.com/student/testing/ap/about.html>.

*This class meets four times a week.*

### **Multimedia [853]**

*Credit: 0.50*

Prerequisites: Technology Applications or Introduction to Computer Programming

Description: This course surveys all digital media types from print to video. Students will learn techniques and terminology associated with each media type. The course culminates with a final video project with focus on movie making and cinematography.

*This class meets four times a week.*

### **Computer Graphics [863]**

*Credit: 0.50*

Prerequisites: Technology Applications or Introduction to Computer Programming

Description: This course is broken into two major subsets: vector graphics and raster graphics. Students will learn how to create, edit, and publish each graphic type. This course focuses on implementation of

available tools rather than design principles. The software used for this course is Adobe PhotoShop and Illustrator Creative Suite 3.

*This class meets four times a week.*

### **Video Game Programming [865]**

*Credit: 0.50*

Prerequisites: Technology Applications or Introduction to Computer Programming

Description: This is an introductory course to programming. Students will learn an object oriented approach to programming via video game models, examples, exercises and projects. The course culminates with students planning, coding, testing and playing their own video game. Visual Basic .NET is the programming platform. This course assumes no prior computer programming experience. Solid algebra skills are helpful but not required.

*This class meets four times a week.*

### **Web Design [873]**

*Credit: 0.50*

Prerequisites: Technology Applications or Introduction to Computer Programming

Description: This is an introductory class in the essentials of web site development and design. The class will include HTML, CSS, Scripting for dynamic content, image manipulation, proper design techniques, and development and building of individual web sites.

*This class meets four times a week.*

## Fine Arts Department [900]

One credit (1.00) is required in the Fine Arts for graduation. A student enrolled in Band, Chamber Orchestra or Men's Chorus for at least two years fulfills the requirement. All sophomores must complete their initial ½ credit introductory fine arts course before the beginning of their junior year. They may choose among Art Appreciation, Music Appreciation, Theater Arts, or Drawing I. Students may complete these requirements in summer school, if the course is offered, before or after their sophomore year. In addition to the Fine Arts credit, all students are required a half credit (.50) in the area of Speech. The Argumentation course listed at the end of this section satisfies that requirement.

### Theater Arts [910]

Credit: 0.50

Prerequisites: open to all students

This class learns theater by doing theater. Taking this class means being on your feet. You will perform improvisational games, give a monologue, work as a team to build a scene, draw basic stage design, and learn how to direct. The class aims to give the student a broad introduction to what is a very diverse art form. In each new unit, we will also examine historical antecedents and give a basic review of relevant theory.

### Stage Acting [912]

Credit: 0.50

Prerequisites: open to all students, except Freshmen

Acting is an intense, exciting, and challenging art. Our class will be an open workshop that moves through a series of acting exercises, including improvisation, movement exercises, group scene work, mask training, dialog, miming, and tempo exercises. As we move through the various trainings, we will read and digest some of the foundational theoretical works on acting.

*This class meets four times a week*

### Theater Directing [914]

Credit: 0.50

Prerequisites: Senior status

Everyone is invited to consider this course, not just students who are actors. Indeed, one of the first lessons of this course is that acting and directing are two very different skills. We will start by covering the basic theory of performance and direction, and then move into a workshop setting in which students apply their skills. The class then allows students to demonstrate their learning in a real-world environment, with a real cast, a real show, and a real audience.

*This class meets four times a week*

### Stagecraft [916]

Credit: 0.50

Course Description: Power tools, construction, and design are at the heart of this course. Students will construct the stage for Jesuit Theater's extracurricular play. However, no extracurricular commitment is required, and no theater experience is necessary. All construction will be done in class. During the course of study, students will learn the skills needed to construct scenery, hang and focus lighting instruments, implement a sound system for effects, and scenic artistry, all in a variety of techniques. Additionally, students will be introduced to basic design theory, and will be given an opportunity to draft their own designs for a theatrical production. *This class meets four times a week*

### Ceramics 1 [921]

Credit: 0.50

Description: A one semester course providing an introduction to the ceramic arts and to the history of the development of ceramics. Students learn the basic skills of handbuilding, use of the potter's wheel and simple sculpture along with methods of decorating and firing clay.

### Advanced Ceramics 2 [923]

Credit: 0.50

Prerequisites: Ceramics 1.

Description: A one semester course concentrating on instruction in more advanced pottery techniques, glaze formulation and use of kilns with further study of ceramic art history. Students choose individual projects which develop their advanced skills. Students at this level are ready to visit museums and galleries to see and appreciate the work of important clay artists.

**Advanced Ceramics 3 [926]**

*Credit: 0.50*

Prerequisites: Junior or senior status; Ceramics 2.

Description: A one semester course in which students are expected to continue to develop and to demonstrate interest in a serious mastery of ceramic techniques. Students can now apply their diverse skills to the accomplishment of projects which are artistically and technically challenging.

**Art Appreciation [931]**

*Credit: 0.50*

Description: A one semester course dealing with art history, aesthetics, art criticism, and extensive studio work exploring materials and techniques.

**Drawing 1 [935]**

*Credit: 0.50*

Description: A one semester course for students with previous art/drawing experience and/or a serious interest in developing their art through focused drawing instruction.

**Art 2 [941]**

*Credit: 0.50*

Prerequisites: Art Appreciation or Drawing 1 and instructor approval.

Description: A one semester course providing instruction in drawing and painting with an emphasis on line, value, design, composition, and rendering skills. Students experience a wide exploration of materials and techniques and the opportunity to develop ideas and personal expression. An introduction to the AP Portfolio is offered as an option to be completed in Art 3 and 4.

**Art 3 [943]**

*Credit: 0.50*

Prerequisites: Art 2; Drawing 1

Description: A one semester course concentrating on serious portfolio work for personal fulfillment or for college applications or for AP Portfolio requirements. Students document their work through slide photography while pursuing the development of a personal vision in their art.

**Art 4 [946]**

*Credit: 0.50*

Prerequisites: Art 3.

Description: A one semester course involving a continuation and completion of work begun in Art 3.

**Advanced Art Portfolio [950]**

*Credit: 0.50*

Prerequisite: review of past work and approval of instructor. Sophomore, Junior or Senior status.

Description: An intensive summer school course designed to assist in the development of a serious portfolio of drawing and painting for those students who intend to pursue the study of art on the college level.

Class is offered only in summer session

**Music Appreciation [951]**

*Credit: 0.50*

Prerequisites: None.

Description: This one semester course is a basic survey of music including music notation, listening skills, and history. Styles of music to be covered: Classical, jazz, pop, and rock.

*This class meets four times a week*

**Advanced Musicianship [953]**

*Credit: 0.50*

Prerequisites: Must be able to demonstrate proficiency in reading music and playing an instrument.

Description: An in-depth study of music theory, ear training, counterpoint, keyboard harmony, and analysis of both classical and contemporary musical forms.

**Jazz Improvisation [955]**

*Credit: 0.50*

Prerequisites: Must be able to read music and demonstrate proficiency on an instrument.

Description: A class which explores the basic techniques used in improvising a jazz solo. Chord structure, scales, and melodic construction are covered.

*This class meets three times a week*

**Chamber Orchestra [957]**

*Credit: 1.00*

Prerequisites: Junior high string orchestra or audition.

Description: Class is the traditional string orchestra (violin, viola, cello, bass and piano). Music ranging from Baroque Era to the 20th century is covered.

Exempt from Credit Maximum

**Vocal Harmony Men's Chorus [961]**

*Credit: 1.00*

Prerequisites: Must be interested in learning to sing music of all styles.

Description: Students will learn to sing and harmonize music from traditional genres as well as pop, rock and jazz. Students will have opportunities to develop their musical potential through learning techniques such as reading music, harmonizing, and group and solo performance skills.

Exempt from Credit Maximum

*This class meets four times a week*

**Band [970]**

*Credit: 1.00*

Prerequisites: Must either play an instrument or be willing to learn.

Description: Class composed of wind and percussion musicians. The organization performs as a marching band August through mid-November. It is a Concert band for the rest of the year, which includes percussion ensemble, jazz band, and chamber music. Students without an instrument will be provided with a school owned instrument.

**Argumentation and Debate [263]**

*Credit: 0.50*

Prerequisites: Freshman or Sophomore status.

Description: Argumentation and Debate is a semester course designed to foster critical thinking. The course will focus on introducing students to the prevalence of argument in our society, how to create and use a well constructed argument, and the debate process. The course will introduce students to types of evidence, reasoning devices, research skills, organizational skills, and critical analysis. The course will use diverse methods to practice and develop these skills including research, debate, and debate analysis

*This class meets four days a week.*

## Community Service [990]

### **Community Service [998]**

*Credit: 100 hours*

Prerequisites: Senior status.

Description: The Jesuit Community Service program seeks to provide an experience for the Jesuit student which will enable him to achieve considerable knowledge of the many needs of local and wider communities. The program seeks to prepare him for the day when he will take a place in these communities as a competent, concerned, and responsible member. The Community Service requirement of one hundred hours encourages the Jesuit senior to be a man of action, confronting issues in the community and striving to build the Kingdom of God on Earth.

On a weekly basis the Jesuit seniors serve over 87 different agencies in the Dallas/Ft. Worth Metroplex. In addition to this regular weekly service, the seniors undertake a multitude of special projects working in diverse areas of need throughout the community and generously devoting many hours of volunteer service.

### **Social and Public Policy [995]**

*Credit: .50*

Prerequisites: Senior status; concurrent enrollment in Community Service.

Description: Public Policy/Social Justice examines the foundations of what defines a just society. The course offers seniors the opportunity to explore the historical development of the conception of the perfect or just world – i.e. Utopia. The class is supplemented with more personal reflections that relate to the seniors specific community service site and the relationship their work and these sites have on building a better world. During the course, students delve more deeply into public policy issues and develop position papers that integrate their more theoretical learning with their chosen public policy topic which is based on the actual experience of doing community service. The course is founded on the principals of Social Justice thought in the Jesuit and Catholic tradition. Topics include: poverty, legal systems, childhood education, immigration, elderly care, and the homeless and social communities.