

# HIGH SCHOOL CURRICULUM GUIDE

2016-17



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## **Introduction to the 2016-17 Curriculum Guide**

Curriculum overviews can be found under each department heading; these describe the core values and characteristic approaches of each academic discipline.

All course descriptions are also on view in the 2016-17 edition. A special effort has been made to represent the material and procedures in each course in a concrete and detailed way. Students and parents are asked to read the Guide with care, and to ask questions about the courses on offer.

Students and parents should bear in mind that not every course listed in the Curriculum Guide will be offered in every semester/year. Please consult the Registration Form for those classes potentially available in a given semester. (Actual course offerings will be based on student interest and teacher availability.)

## Requirements and Policies

A strong college-preparatory program includes four years of English and history, three or more years of mathematics and sciences, and two or more years of world language. Students are required to take six credits of academic courses in the ninth grade and a minimum of five credits of academic courses in subsequent years, plus athletics/arts.

### **A minimum of 22 credits are required, including**

<b>English</b>	four credits; must be English I, II, III, and IV
<b>History</b>	three credits, one of which must be US History. All students are required to take a history course every semester
<b>Mathematics</b>	three credits, with required completion of Algebra I, Geometry, and Algebra II
<b>Science</b>	three credits, with required credit in both physical and natural sciences
<b>World Languages</b>	two credits earned at the high-school level
<b>Art</b>	one credit, typically earned in the 10th grade
<b>Fitness, Health and Skills</b>	one credit earned in the ninth grade
<b>Athletics</b>	three athletic activities, one each in Grades 9, 10 and 11
<b>Senior Project</b>	one credit in the Senior year

Students should keep in mind that when colleges look at a transcript, they consider not only grades, but the quality and difficulty of the courses a student has taken. The overall quality of a student's program is more important than just grades or number of courses. Graduation requirements ensure variety on transcripts, and electives are offered for depth in special areas of interest.

### **Credit for one-semester and full-year courses**

The school year at St. Francis is divided into semesters. Full-credit courses meet for the equivalent of one period daily during the full year, and mastery of course objectives earns one credit. Half-credit courses meet for either the equivalent of a period daily for one semester or two to three periods weekly for a full year, and mastery of course objectives earns one-half credit. A student who fails one semester of a year-long course but passes the other semester in a demonstration of accumulated mastery may earn the full credit.

## Basic Course Sequence

	9th Grade	10th Grade	11th Grade	12th Grade
<b>English</b>	English I	English II	English III	English IV or AP
<b>History</b>	C&C I: Ancient	C&C II: Medieval	US History	Senior Sem. or AP
<b>Mathematics</b>	Algebra I*	Geometry	Algebra II	Student Preference
<b>Science</b>	Physics	Chemistry	Biology	Student Preference
<b>World Language</b>	French, Spanish, Chinese I**	French, Spanish, Chinese II	Student Preference	Student Preference
<b>Art</b>		Art I, Music, Photo, Video	Student Preference	Student Preference
<b>Health</b>	Health & P.E., Athletics	Athletics	Athletics	Student Preference
<b>Electives</b>			Student Preference	Student Preference

\*\* Students who have interest and appropriate background may place out of Algebra I, Geometry, or Algebra II their freshman year, and may be accelerated in the sequence.

\*\*Students who have interest and appropriate background may place out of the first year(s) of World Language, and may be accelerated in the sequence.

### **Grading Procedures**

The St. Francis grading scale is as follows: A+ (98-100), A (92-97), A- (90-91), B+ (88-89), B (82-87), B- (80-81), C+ (78-79), C (72-77), C- (70-71), NC (0-69). Grade point averages are calculated on an unweighted 4.0-scale as follows: 4.3 (A+), 4.0 (A), 3.7 (A-), 3.3 (B+), 3.0 (B), 2.7 (B-), 2.3 (C+), 2.0 (C), 1.7 (C-), 0.0 (NC).

### **Course Placement upon Entry**

Placement in math, science and world languages will be based initially on satisfactory performance on an entrance exam and/or the student's having satisfactorily completed the previous level at another school. Reassignments may need to be made once school begins.

### **Advanced Placement Courses**

A number of courses at St. Francis are based on course outlines developed by the Advanced Placement Program of the College Examination Board. These courses have the workload and sophistication of courses found at the introductory college level. Taking such a course at St. Francis offers the student more academic challenge, an opportunity to see what college requirements are like, and the possibility of gaining college credit. At the same time, the student has the advantage of the St. Francis small-class atmosphere, more frequent class meetings and readily available help from teachers. Student performance in these courses can be evaluated on a nationwide scale if the appropriate AP exams are taken in May. Many colleges confer course credit for high grades on AP exams. The exams themselves are good practice for the cumulative three-hour exams often given in college.

At St. Francis, the following courses help prepare students for AP exams: AP English Literature, AP Calculus AB/BC, AP Chemistry, AP Biology, AP Physics, AP Environmental Science, AP Statistics, AP U.S. History, AP European History, AP Chinese Language, AP French Language, AP Spanish Literature and AP Spanish Language. These courses have heavier workloads than do regular courses; therefore, students interested in taking one of these courses need to consider carefully their overall course loads in consultation with teachers and their advisor. Students with appropriate prerequisites (as noted for each course) will be accepted into an Advanced Placement course based on the recommendation of teachers. Students who enroll in an AP courses at St. Francis are required to sit for the exams in May. In addition to the courses offered, ad hoc preparation is offered for the AP World Civilization, and AP English Language exams.

### **Independent Study**

Individual students or small groups may apply for independent-study projects under faculty guidance. Independent-study projects permit extensive work with outside sponsors or a faculty tutor in a wide range of academic and non-academic fields. Depending upon the nature of these independent study projects, students may receive credit. With the school's approval, students may also enroll in other institutions for courses not available at St. Francis.

### **Outside Credit**

Students wishing to pursue learning projects outside of SFS can receive St. Francis credit for class work that has been pre-approved by the Head of Downtown Campus and the Registrar. While St. Francis grants credit for these courses, grades will not be transferred; any grades received for outside coursework will not be averaged into the student's GPA. Students may be required to pass a St. Francis examination in order to receive credit for required courses.

**Transfer Credit**

Students transferring to St. Francis must request that an official transcript from their previous school be sent to the Registrar's Office at St. Francis. The previous school's transcript will be attached to the St. Francis transcript. Credits earned at a previous school(s) will be included in the total number of credits required for graduation from St. Francis, although grades from previous schools will not be included in the St. Francis GPA. St. Francis transcripts show semester grades.

**Community Service**

Community service is an important part of the St. Francis curriculum each year, with students and faculty/staff participating in six half-days of service each year.

**The Senior Project**

The Senior Project is intended to provide all St. Francis seniors with the opportunity to devote significant effort and time to a project focused on that which vitally interests them; develop the research skills expected of college-bound students; make a public presentation of their work; and demonstrate that their years at St. Francis have culminated in mature and confident scholarship. During the junior year, students determine and describe their projects and choose their advisors; they complete research, written, and performance components of their projects in their senior year. The Senior Project is a requirement for graduation; all those receiving a St. Francis diploma will have successfully completed this demanding and long-term undertaking, and will have thus demonstrated the skills and commitment that diploma certifies. *See more about the Senior Project on page 32 of this Guide.*

## English

### English Department Curriculum Overview

English at St. Francis is an intimate, collaborative and creative practice.

*Inside the English classroom*, students' desks are ranged in circles or their chairs around a seminar table. For the ten months of the academic year, English teachers and students are members of a small community in which each student's intellectual, aesthetic and personal discoveries are elicited. The heart of English teachers' work at St. Francis is to arrange for, encourage, model, coach, and, when necessary, insist on thoughtful expression in individual voices. The heart of students' work in English is a variety of projects and texts leading a variety of individuals to the pleasures of literacy and of confident, competent self-expression; the heart of students' work is also collegial, as in workshops and seminars they experience the whole as greater than a sum of parts, taking part in a searching, open-minded, many-voiced conversation.

*Outside the classroom*, our communal dialogue begins on the first day of school, when every member of the school community – students, faculty, and staff – shares his or her response to the all-school summer-reading. That discussion continues throughout the year at every Morning Meeting, which ends with a student or staff member reading a poem of his or her choosing. During the Showcase of Students Plays in the spring, student writing in a variety of genres is performed on two nights running, typically to a sell-out crowd. The communal conversation comes to a close at the end of the year, with the publication of an ambitious student literary magazine and the presentation of staff-written speeches about each graduating senior. The collective creative process also involves extra-curricular activities, like the songwriting and theatre clubs, and independent creative projects, such as student-created mix tapes, chapbooks and creative-writing Senior Projects. The St. Francis community is a space of publication and engaged literary discourse.

At St Francis, we believe that to take the time, effort, and care to consider not only what we say but how we say it, and to pay close, careful attention – whether as participants in a revision workshop, readers of a monumental poem, or audience members at a spoken-word performance – to the words of others are not only indispensable human responsibilities but also educated pleasures no one should have to live without.

### English Department Course Offerings

#### **English I** (*Ramirez; 1 credit*)

In English I we use writing and reading as extensions of thinking. We focus on craft, the writing process, and the use of rhetoric as means of communication and expression. We read texts closely, producing and developing our own ideas and allowing ourselves to be influenced by what we read and question what we read. We learn from past and contemporary masters of English letters. We write academic papers. We write creatively. We use the imagination - stretch, unhinge, create. Please remember “there is no sight without fire.” (Ezra Pound, Canto 98).



**English II** (*White; 1 credit*)

Sophomores study vocabulary in the context of the reading material. Usage and sentence structure will be addressed throughout the year. Students will write frequently in a variety of genres, including journal responses, poems, short fiction, memoir, and formal analytical essays, and will read in all genres, including lyric poetry, drama (a Shakespeare play), short stories, novels, and literary criticism.

**English III** (*Paice; 1 credit*)

This course approaches American literature less as a natural evolution or a set of specific stylistic characteristics than as a varying series of responses to the historical, technological, intellectual, and political conditions of everyday life in the United States. In the course of our literary analyses, we will address how American literature grapples with notions of personal and collective identity, the social conditions of marginalized populations, and what being **American** has come to mean over the course of time into the contemporary moment. We will concentrate heavily on honing our writing skills with special attention to strong sentence composition and carefully crafted self-expression. Students will also be asked to reflect upon their roles as part of a larger community of academic inquiry where each personal voice is valued. Assigned readings will include novels, poems, short stories, a play, and a graphic narrative. Since visual culture plays an important role in our investigation of this period, we will also watch excerpts of films during the course of the semester. Class meetings will combine lecture and discussion formats. Passionate and thoughtful participation is required.

**English IV** (*Paice, Ramirez; 1 credit*)

This course explores how literature and film communicate notions of personal and collective identity, the social conditions of marginalized populations, and construction of gender. We concentrate heavily on honing our writing skills with special attention to strong sentence composition and close, creative reading. Most immediately, we will address the most effective ways to craft an engaging personal statement for college admissions. Class meetings will combine lecture and discussion formats. Passionate and thoughtful participation is required.

**AP English Literature and Composition** (*White; 1 credit*)

*(Prerequisites: B+ in second semester of English III, recommendation of the English III teacher and permission of the teacher of this class)*

This course will be most appropriate for students with brisk reading speed and good comprehension, some interest in poetry, and a willingness to work hard to improve their writing about literature. Emphasis will be on reading (mostly monumental) canonical works – poems, plays, novels, and essays – and on learning to describe their artistic achievements in a lively personal voice. Historical and cultural contexts as well as contemporary literary theory will be introduced and discussed. Students enrolled in this class are expected to sit for the AP English Literature examination in May. *This course has a summer reading and writing requirement.*

**History of Classical Hollywood Cinema** (*Paice; Fall; 1/2 credit*)

This course explores the period of Classical Hollywood Cinema (CHC), including its industrial conditions and aesthetic impact on global cinema. Students will learn how the period of Classical Hollywood established a film language through its manipulation of the basic elements that distinguish film from other aesthetic forms, including editing, cinematography, sound,

*mise-en-scene*, and visual narrative. We will examine critical methods used to analyze Classical Hollywood films in greater depth, drawing on interpretive frameworks such as genre theory, auteurism, and ideological analysis. We will also discuss Classical Hollywood Cinema's relationship with the Hays Production Code, television, art cinema, and the politics that shaped U.S. culture. Finally, we will examine the period immediately following Classical Hollywood – the Post-Classical Era – in order to assess what stylistic, substantive, and technical departures occurred in the wake of the Hays Code's ineluctable demise.

**Global Cinema 1940-Present** (*Paice; Spring; 1/2 credit*)

This course traces the major developments in world cinema from the post-World War II era to the present day. The course is structured chronologically, for the most part, and focuses on crucial instances in the history of cinema. We will address cinematic events that are particularly relevant from a historical perspective, be it aesthetic, political, technological, cultural and/or economic. We will discuss the tension that persists within film culture between competing notions of film's significance, whether as an artistic production, ideological tool, or economic endeavor. This course will expose students to films from other cultures, traditions, values, and aesthetics, advancing a pluralistic conception of cinema that looks beyond Hollywood to expand an understanding of what cinema is, can be, and must do. This course will foster the critical skills necessary for students to evaluate and advance their own arguments about the events, causes, and consequences of post-World War II film history.

**Reading and Writing New Contemporary Genres: Micro-fiction and the Prose Poem**

(*White; Fall and/or Spring; 1/2 or 1 credit*)

The last two decades or so have seen authors and poets experimenting with formal innovations and hybrids: very short narratives -- variously called micro-fiction, short shorts, flash-fiction and sudden fiction -- and, in poetry, the prose poem. These new forms promise a lot for the beginning writer: focus on language, economy and compression, not to mention just the many interesting examples in published work, as models and inspiration. In this course, we'll read and write both micro-fictions and prose poems. As in any creative-writing class, we'll collaborate in workshop and revision.

**New Voices Playwriting at St. Francis** (*J. Jones; 1/4 credit*)

Aimed at teaching the basics of playwriting, students will learn how to transform imagination into characters, dialogue, and action by writing monologues, dialogues, and short plays. Students will create and act through writing new works that speak authentically in their own voice. Student-written plays will be submitted to the Actors Theatre of Louisville New Voices Young Playwrights Contest, where winning plays are developed and fully produced in an evening of world premieres performed on stage at Actors Theatre by members of the Acting Apprentice Company. In addition, plays written in the class will be eligible for St. Francis School's December drama production, the Showcase of Student-Written and Directed Plays. This class will meet once a week during the Projects period during the first semester. The class is open to students in all grade levels.

## Fine Arts

### Fine Arts Curriculum Overview

Fine Arts at St. Francis take the form of studio art, photography, filmmaking, and music. The studio art course offers experience in the basics of achieving classical drawing skills in a range of media; experience in the collaborative creation of conceptual art; some work in 3-D art; and an introduction to art history. At easels and tables in an airy environment lit by skylights, students find their innate creative abilities. The classroom is informally structured to encourage students to work individually yet find encouragement and inspiration from classmates around them. The photography and filmmaking classes combine creativity and technique, with students learning to shoot and then editing their work into a finished piece. The music class focuses on theory, history, and performance. Students choose one of these courses in 10th grade and can continue taking fine arts courses on an elective basis thereafter.

Current work from the studio art course and the photography class is invariably on display in the hallways. Film pieces are shown to the school at Morning Meeting, and music students perform for the whole school several times throughout the year as well as at designated events.

Teachers in fine arts classes are designated as **artists-in-residence**. The goal of the artist-in-residence is to help students find that unique individual voice that presents itself in any given media and encourage its growth. All the artists-in-residence have active professional careers distinguished by years of dedication to their crafts and by reputations that extend beyond the city limits. Their career focus provides a window into the highly competitive world of art and music as professions.

Art and music students are asked to keep open minds and work thoughtfully. Their shared experiences with art- and music-making are discussed in critiques that emphasize each person's growth and unique vision. Perceptions are challenged in discussions that lead to a greater appreciation of the unlimited range of expressiveness.

### Fine Arts Department Course Offerings

#### **Studio Art** (*Leidner; 1 credit*)

In this course, students will work and play with ideas almost as much as actual physical materials. Alongside learning advanced techniques in drawing, painting, printmaking, sculpture, and installation, emphasis is placed on developing a sense of conceptual creativity and an advanced vocabulary for discussing art. Students will learn that in today's postmodern world, there are many ways of being a great artist and there are no definite rules for what art should look like--except that good and important work must be made with rigor, energy, meaning, and/or relevance to its context. Students that come to this class with an open mind and a commitment to improving their skills will leave with new knowledge about art processes, about themselves, and about what art can mean to society at large.

#### **Advanced Studio Art** (*Leidner; 1 credit; permission of the instructor*)

This class aims to foster self-motivation, self-discipline, curiosity, and a strong spirit of independence in students wishing to expand their education in studio art. Students may explore in depth a particular area of interest throughout an entire school year, resulting in a final cohesive body of work. Because students work mainly on their own without a class environment, time management becomes an essential skill to develop in this class in order to be successful, and an emphasis is placed on the importance of finding a balance between experimentation and focus. Students are asked to do research outside of the classroom in the form of visits to local art collections to increase their awareness of relevant historical and contemporary contexts. Weekly group discussions among the Advanced Art students, along with twice-yearly formal group critiques, contribute to creating a dynamic and supportive community within which Advanced Art students may cultivate their work.

### **Introduction to Film/Video** (*Borders; 1 credit*)

This class emphasizes the art, tools, and commerce of film and video production. We begin with the written word. Each student brings a concept that is to be shaped into a workable film treatment and, finally, a shooting script. Once the script is honed and evaluated and with the participation of the class members, the production breakdown begins. By the end of the school year, students will have created a finished screenplay, a filmed scene from the original screenplay, and a completed short film. The final films are viewed by the student body in a special screening at St. Francis. In addition, the class makes an on-going documentary, with editing duties performed by each member of the class. Guest lecturers, professionals both local and national working within the television and film industries, help give our students perspective and practical career advice. Film criticism and film reviews are also read, discussed, and (often) debated.

*\*Students who have already taken this course may take an Advanced Film independent study course with the permission of the instructor.*

### **Introduction to Creative Photography** (*Dailinger; 1 credit*)

Photography is the art, science and practice of creating images by recording light. Through lectures, assignments, gallery visits and personal investigation, students will develop a basic understanding of their digital camera and current electronic imaging technology. While establishing technical skills, students will explore the possibilities of this medium for visual communication and personal expression. Throughout the year, students will be exposed to a variety of photographic artists and styles. We will cross-reference art movements as well as other artistic mediums. The course is rooted in traditional photography with a modern day approach to the processing of their work. A digital camera (basic point-and-shoot, DSLR, or smartphone) is required.

*\*Students who have already taken this course may take an Advanced Photography independent study course with the permission of the instructor.*

### **Music Performance** (*Bertke; 1 credit*)

This course will build on the fundamentals of musicianship and creativity through performance. Unit topics and repertoire will include a wide variety of styles and musical eras ranging from, but not limited to, Baroque, Folk, Mountain, Jazz, Rock, Pop, and Hip Hop. Other styles and genres will be explored as well, but this will be based on the abilities and desire of the ensemble. Students in Music Performance are expected to perform at school functions where music is a desired element. One evening concert will be scheduled in the winter. The Spring concert will be part of the student art show. In addition to the above performances, students will also learn

basic music theory, and will write and arrange music for the ensemble. Grades will be awarded based on attitude, participation, musical growth, weekly written assignments, and attendance at performances. Requirements include arranging a piece of music to be performed in concert; regular practice at home; and auditioning for All State/All-District Band, Orchestra, Choir, Jazz Band, or other pre-approved outside ensemble. Students in this course will be fully graded.

*\*Students who have already taken this course may take an Advanced Music course with the permission of the instructor.*

**Jazz Ensemble and History** (*Bertke; ¼ credit*)

Jazz Ensemble and History is open to interested vocal and instrumental students and will be held yearlong during the Projects period. The course will be centered on jazz history and appreciation, as well as learning and performing jazz repertoire. The jazz history/appreciation portion will be focused on jazz standards, famous albums, and artists. Students will learn style as well as try to transcribe recorded solos. The performance portion will be focused on jazz combo repertoire and ensemble performance. Please note, participation in outside concerts/performances and occasional rehearsals are required for credit in this course. These performances include, but are not limited to, the University of Louisville Jazz Festival, KMEA State Jazz Assessment, area colleges' jazz clinics, SFS winter and spring performances, and school open houses. In addition, all students will be highly encouraged to audition for the KMEA All-State Jazz ensembles in December. A strong knowledge of scales and chord structures will be helpful for all students, but is not a requirement for entering the ensemble.

## History and Social Sciences

### History Department Curriculum Overview

The History Department's goal is to encourage thoughtful reflection and independent thinking about historical events through the study of geography, social conditions and categorical contexts. Our focus is global, and as a result we emphasize connections more than isolated facts. In addition, a continuous effort is made to meaningfully connect the past to the present and the present to the past: thawing frozen history and making sense of the contemporary world. Group work, visiting speakers, field trips in the city, and creative presentations of historical information help involve the students in an interactive and engaging way. Interdisciplinary activities also enrich historical understanding.

In accordance with the above goal, and unlike any other school in the region, St. Francis requires students to take four years of history. During the first two years of the curriculum, students are introduced to civilizations, cultures, and socio-religious traditions in the ancient and medieval worlds, respectively. In addition to providing a cultural and geographical base, the Culture and Civilization courses in the freshman and sophomore years stress basic research techniques, primary-source textual analysis, and effective written expression. Most classes are conducted in the discussion format, emphasizing respectful interaction.

In the junior year, students take US History or one of the Advanced Placement History offerings. Seniors take an Advanced Placement History course and/or 20<sup>th</sup> Century Seminars and electives. This culminating year prepares students for college academic work by covering a demanding curriculum that stresses independent reading and research as well as lively and informed classroom discussions.

### History Department Course Offerings

#### **Culture and Civilization (Ancient World)** (*Marshall; 1 credit*)

This is the first part of a two-year World History sequence required for all 9<sup>th</sup> graders. In this course students begin with an overview of cultural anthropology. Using this as a basis for exploration, students survey world history from its beginnings in Africa and Asia to the advent of the Middle Ages in Europe. Main themes include the borrowings from and blending of cultures, the characteristics of empires, and the reasons for the declines of civilizations. Students will be introduced to several historical tools, including document analysis, religious texts, archeology, and literature. Geography – using many types of maps – is a course component throughout.

#### **Culture and Civilization (Medieval World)** (*Apple; 1 credit*)

This course for 10<sup>th</sup> graders will apply critical thought to the concepts and historical records of cultures and civilizations in medieval global history. Different strands of Christianity, Islam, Vedic theism, Confucianism, and Buddhism, as well as identities associated with ethnicity and socio-economic groups, will be addressed in context. The object is to provide students with tools to act and communicate meaningfully in an interdependent world community.

**United States History** (*Miron; 1 credit*)

This course will use a chronological narrative approach to examine our nation's past, in order to provide students with a necessary base as they assume the mantle of adult citizenship. The parameters of the instruction will be from the European contact up until the present day, and students will examine common themes (government, economics, religion, war, society, and culture) across time to gain an understanding of how the past impacts the present. Skill development will stress coherent written and oral expression, researching in a time of technological change, and clear reasoning and interpretation. Class requirements will include a significant amount of reading and formal writing assignments.

**AP United States History** (*Apple; 1 credit*)

*Prerequisite: AP European History; permission of the instructor*

*Enrollment in this class is contingent upon successful completion of a summer reading assignment*

AP U.S. History covers the spectrum of American history from pre-Columbian days to the present. Using chronological and thematic approaches to the material, this course exposes students to extensive primary and secondary sources and to the historiographical interpretations of various scholars. Thoughtful class participation and written assignments will be crucial to success in this course.

**AP European History** (*Miron; 1 credit*)

*Prerequisite: permission of the instructor*

*Enrollment in this class is contingent upon successful completion of a summer reading assignment*

This year-long course is designed to be a rigorous survey class of modern European history from the Renaissance to the post-World-War-II period. Political, social, and cultural dimensions of the complex that is European history will be analyzed, with particular emphasis on the French Revolution, the rise of the bourgeoisie, the Industrial Revolution, war and revolution, and the response of artists and intellectuals to events and trends. This course demands sophisticated reading and writing skills and the willingness to engage difficult material energetically. Preparation for both discussion and written presentations will demand time and efforts. Students are expected to take the AP European History exam in May.

**20<sup>th</sup> Century Senior Seminars**

Senior Seminars provide students the chance to pursue focused study of selected topics in 19<sup>th</sup>- and 20<sup>th</sup>-century history and will include intensive reading, involved discussion and presentation of papers. Proficiency in world geography is a requirement of the courses. **Seniors not enrolled in an AP History course must take one Senior Seminar each semester.** *Each is offered for ½ credit.*

**The Contemporary World** (*Miron; Fall; ½ credit*)

This course will examine a number of current international, national, and regional/local issues. This is by necessity a reactive exercise, but the U.S. elections of 2016 will be one obvious area of study this fall. A focus on civics literacy will accompany this unit. Also, there will be an examination of a distinct area of the world (e.g. The Middle East) each quarter from geographic, historical, and contemporary perspectives. Instead of a traditional semester exam, students will complete a final project and class presentation on an aspect of contemporary culture and the future implications thereof.

**History of Gender Studies in America** (*Buck; Fall; ½ credit*)

Gender is the core of identity; to imagine a world without it is to challenge the framework of social, political, and historical constructs. How does gender govern our lives? Who would we be, genderless? This course invites students to critically examine the ways in which gender shapes experience: students will engage with both academic and experiential modes of learning. The course reader will provide a historical context within which to begin investigating gender this semester, from a chronological study of gender in America since 1840 through the 21st century. Activities and class discussions will encourage students to interact with gender on a more personal level; by the end of the semester, all should be able to thoughtfully answer the question “What does gender mean to me?”

**Constitutional Law** (*Apple; Fall; ½ credit*)

This course will examine several aspects of U.S. constitutional law from both a legal and historical perspective. Students will read actual case law and learn how to thoughtfully digest legal opinions and to develop the vocabulary and tools necessary to understand how the Constitution shapes American life and serves as a useful reflection of American history. Because this is a presidential election year, this class will pay particular attention to free speech, voting, and election concerns that will be at the fore of public discourse throughout the fall.

**Truth in an Age of Virtual Reality and Social Media** (*Marshall; Fall; ½ credit*)

This course will examine the notion of Truth in a world where data is overloading our ability to meaningfully interpret our conditions. It will look at ontology (truth or being), epistemology (how we know what we know) and the collapse of both in the glow of the Internet and the lure of virtual reality. We will examine the pros and cons of this collapse and the impact it is having on society. By addressing a fundamental philosophical question from within our contemporary context, our own assumptions and our connection with past assumptions will be exposed, eventually making the pursuit of knowledge more meaningful and gratifying for the students. The course will involve reading, discussion, and a final paper. Students will be expected to lead discussions several times during the semester.

**Babylon** (*Studevent-Hickman; Fall; ½ credit*)

*\*This course may or may not be offered; if this is your first choice, please indicate at least one backup.*

This course provides an introduction to the history and legacy of the ancient city of Babylon. Topics include Babylonian society under King Hammurabi, what we know about such landmarks as the Tower of Babel and the Hanging Gardens of Babylon, and how the city became a symbol in the West for all things wicked. The last part of the semester looks at the recent history of the site, within the context of war, looting, international law, and the cultural heritage of the Iraqi people. The course integrates archaeological, art historical, textual, and other data to explore these topics.

*\*Spring Senior Seminars will be announced in November, and students will sign up for them then.*



## Mathematics

### Math Curriculum Overview

The math department at St. Francis strives to provide students with not only the mathematical skills they will need to take their place in a technologically advanced society, but also with the fundamental skills, procedures, mathematical thinking, problem solving, and good judgment to continue their mathematics education at the most competitive universities and throughout their careers. We emphasize the necessity of communicating answers in mathematically correct notation, and in complete sentences. We expect our students to take advantage of the opportunity for personal interactions with their instructors, in accordance with the larger goal of having our students grow into mindful, informed young adults. Students are encouraged to be part of the process, driving discussions, working through problems, and being full partners in their own education.

We offer a full range of coursework in high-school mathematics, beginning with Algebra I, Geometry, and Algebra II, with a range of options after Algebra II. In the courses through Algebra II, we use texts that emphasize the importance of students confidently discovering the fundamentals of math through thoughtful problem solving and application of their basic skills. This process builds confidence in all students regardless of their past math experiences. After Algebra II, students can opt for MMT, Precalculus, AP Calculus AB/BC, Multivariable/Vector Calculus, and/or AP Statistics. Texts for these courses are college-level, and emphasize correct and consistent use of mathematical vocabulary and notation.

Beyond the ordinary curricula, we offer students the chance to participate in the Greater Louisville Math League, a challenging competition held four times per year, with both individual and team scores reported. Selected students are also invited to participate in the American Math Competition, the first level of a talent-search process. Those students scoring above 100 will be eligible to compete in the American Invitational Math Exam, and the top few hundred students in the nation on that exam will be invited to a summer camp to choose the US Math Olympiad Team, for international competition.

### Math Department Course Offerings

#### **Algebra I** (1 credit)

This is an introductory course in algebra covering the basics of using variables and grouping symbols, exponents, and real numbers, including irrational numbers. Topics will include simplifying variable expressions given values for the variables, solving linear equations in one variable, polynomial operations, factoring polynomials, working with algebraic functions, graphing linear equations and inequalities, exploring exponential patterns, and an introduction to

quadratic functions. There will be considerable emphasis on word problems and on the correct and consistent use of appropriate mathematical notation and vocabulary. A TI-84+ calculator is required.

### **Geometry (1 credit)**

*Prerequisite: Algebra I*

As well as being the study of the mathematics of points, lines, planes, and other geometric objects, geometry is concerned with the process of careful, organized, abstract thinking. Students will learn the importance of careful definitions and learn to make conjectures and justify arguments through different types of formal and informal proofs. Additional topics will include congruence and similarity, solid geometry, coordinate geometry, transformations, and graph theory. A TI-84+ calculator is required.

### **Algebra II (1 credit)**

*Prerequisites: Algebra I and Geometry, or concurrent enrollment in Geometry*

This is the sequel to Algebra I, and although it is usually taken after Geometry, concurrent enrollment in Geometry will provide the necessary background. Topics covered will include linear equations and systems, quadratic equations and systems, polynomial, rational, exponential, matrix algebra, conic sections, and an introduction to trigonometry. A TI-84+ calculator is required.

### **Precalculus (1 credit)**

*Prerequisites: Algebra II with a minimum grade of B- and permission of the instructor*

This is a course for students who plan to take calculus or have the necessary level of interest. Topics will include a detailed study of functions, including polynomial, exponential, logarithmic, logistic, rational, and trigonometric functions. Other topics include conic sections, polar- and parametrically-defined functions, vectors, complex numbers, matrix algebra, sequences and series, basic combinatorics, and probability. A TI-84+ calculator is required. The correct use of and the limitations of scientific calculators will be emphasized.

### **Mathematical Modeling (with Trigonometry) (1 credit)**

*Prerequisites: Algebra II*

Students in this course will use a variety of algebraic, geometric and analytic skills to model real world phenomena and answer questions about those models. Students will study the mathematics of growth and decay, not only in the context of biological and chemical systems, but also as it pertains to finance. Students will use trigonometry to solve problems in engineering and other geometric applications. They will also use trigonometry to model periodic (or semi-periodic) phenomena, such as tides, sales, etc. Students will also do statistical and probabilistic analysis in a variety of contexts. Other topics may include--but are not limited to--voting theory, graph theory, physics applications, the mathematics of art and simple proof-writing.

### **AP Calculus AB/BC (1 credit)**

*Prerequisites: Precalculus and permission of the instructor*

This is a one-year course covering all the items in the AP Calculus AB syllabus, and additionally the extra topics included in the BC syllabus. Upon successful completion of the course, students

will be qualified to take the AP Calculus AB or BC examination. Topics will include limits and continuity, the derivative and its applications, the integral and its applications, and the fundamental theorem of calculus. BC-only topics include the calculus of polar and parametrically defined functions, vector functions, improper integral forms, L'Hospital's rule, first order separable differential equations, slope fields, and a detailed study of infinite series, including convergence tests and the MacLaurin and Taylor series. A TI-84+ calculator is required.

**AP Statistics (1 credit)**

*Prerequisites: Algebra II and permission of the instructor*

This AP course in Statistics will introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: (1) Exploring data: describing patterns and departures from patterns; (2) Sampling and Experimentation: planning and conducting a study; (3) Anticipating Patterns: Exploring random phenomena using probability and simulation; (4) Statistical Inference: estimating population parameters and testing hypotheses. Students who successfully complete the course and exam may receive credit, advanced placement, or both, equivalent to a one-semester introductory college statistics course. A TI-84+ or better calculator is required for both the course and the AP exam.

## Science

### Science Curriculum Overview

When you walk into a St. Francis science classroom, you'll find students engaged in applying science principles to everyday life. Whether it's designing a safe but universally thrilling roller-coaster in physics, synthesizing the "bounciest" bouncy ball in chemistry, or sampling local waterways in biology, students appreciate science as a process, rather than an accumulation of facts.

St. Francis embraces the Physics First curriculum philosophy, which elevates Biology to a capstone course. The required core curriculum sequence is Conceptual Physics for freshmen, Chemistry for sophomores, and Biology for juniors. Rather than merely flipping the traditional order, this sequence of courses allows students to progressively build on their scientific knowledge and curiosity.

Students then have the opportunity to take semester electives and/or Advanced Placement courses in physics, biology, environmental science, and chemistry. Students can also participate in Science Olympiad, which is a national science competition where students can compete in physics, engineering, biology, and general science.

A St. Francis alum will have the tools to critically analyze the often- oversimplified presentation of scientific data in news, advertisements, and pop culture. Through collaborative investigations and student-centered classroom discussions, students learn how to develop good questions, how to research and analyze the world around them, and how to effectively communicate their findings to the greater community.

### Science Department Course Offerings

#### **Physics** (*Studevent-Hickman; 1 credit*)

What keeps airplanes in the air? How does a compass know how to point north? Would it be possible to play baseball on the moon? In this course, students address these and more questions, and, in the process, investigate the deepest principles that govern life and the universe. Physics is about discovering the fundamental laws of Nature and students in this course study not only those laws, but also the process of discovery that has brought about the modern age of science. Students in Introductory Physics conceptually explores topics including

motion, forces, energy, waves, light, electricity, magnetism, and atomic physics through a combination of lecture, discussion, labs, and hands-on activities.

**Chemistry** (*Johnson; 1 credit*)

Chemistry is the study of matter, its structure, and transformations. In this inquiry-based course, students design and conduct experiments to answer questions about the chemical nature of their surroundings. Presented with a series of authentic problems, students work in teams to devise methods to find solutions, proceed to the lab where they collect and analyze data and communicate the results of their investigations in written lab reports. Over the course of the year, these experiments, along with supplemental readings from the text, help students construct an understanding of the nature of the forces that hold matter together and the energy changes associated with establishing or disrupting those forces. A broad range of experiments serves to familiarize students with standard laboratory procedures and methods for analyzing data, as well as providing them with an appreciation for the inherent uncertainty in measurements. Major topics include atomic structure and periodicity, chemical nomenclature and formulae, chemical reactions and equations, stoichiometry, chemical bonding, the structure and properties of matter, the role of energy in chemical and physical change, and the study of gases and solutions.

**Biology** (*Word; 1 credit*)

Biology is the study of living things. Starting with the cell and its many structures, students will gain an understanding of how things work within individual organisms and how organisms interact with other organisms within their environment. Hands on classroom activities will enhance scientific thought development and understanding of the living things around us.

**AP Chemistry** (*Johnson; 1 credit*)

*Prerequisites: Physics; grade of A- or higher in Chemistry; permission of the instructor*

Advanced Placement Chemistry is the equivalent of a full-year major's undergraduate chemistry course and is designed to follow the successful completion of introductory Chemistry. Topics include the structure of matter, kinetic theory of gases, chemical equilibria, chemical kinetics, and the basic concepts of thermodynamics. Strong emphasis is placed on chemical calculations and the mathematical formulations of principles. The course should contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing, with clarity and logic. This rigorous course is intended for students who have demonstrated a willingness to commit considerable time to studying and completing assignments outside of the classroom. *Students who complete this course are well prepared to take the AP Exam in May. This course has a required summer assignment.*

**AP Biology** (*Word; 1 credit*)

*Prerequisites: Biology, except in exceptional cases, and permission of the instructor*

*\*AP Biology and AP Environmental Science are offered in alternate years. AP Biology is being offered in 2016-17.*

Advanced Placement Biology is a challenging course that covers both classical and modern concepts of biology. The ongoing knowledge explosion in biology makes these goals even more challenging. However, the primary emphasis is on developing an understanding of biological concepts. Essential to this conceptual understanding are: a grasp of science as a process rather than an accumulation of facts; personal experience in scientific inquiry, recognition of unifying themes that integrate the major themes of biology; and application of biological knowledge and

critical thinking to environmental and social concerns. Students who complete this course are sufficiently prepared to take the AP Exam in May. *This course has a summer assignment.*

**AP Physics C: Electricity and Magnetism** (*Studevent-Hickman; 1 credit*)

*Prerequisites: Physics; Chemistry; Precalculus or AP Calculus concurrently with this course; permission of the instructor*

This course offers a solid foundation in electricity and magnetism, in preparation for the AP examination on the subject in May. Topics include static electricity; resistors, capacitors, dielectrics, and inductors; electric circuits (including RLC circuits); magnetic fields; and electromagnetism, including Maxwell's equations. Lab work and lab reports form an integral component of the course. There is a great deal of math and is calculus-based. Students need not have already taken calculus to enroll, (and in many cases will be taking calculus concurrently with AP Physics); however, they must show strong aptitude for math and will need to spend extra time with the instructor outside class to get the tools they need as soon as possible. *Students who have not already taken AP Calculus will need to complete a short math "primer" over the summer; it will cover the basics of taking a derivative and performing an integral. Even students who will be taking Calculus along with Electricity and Magnetism will need to do this reading.*

**Anatomy and Physiology I** (*Word; Fall; ½ credit*)

This semester-long course covers both the structure and function of the integumentary, skeletal, muscular, nervous, and endocrine systems. Students will engage in laboratory and in-class activities that will reinforce concepts and principles presented in class.

**Anatomy and Physiology II** (*Word; Spring; ½ credit*)

Although this course picks up where Anatomy and Physiology I ends, the fall semester is not a prerequisite. We will look at the structure and function of the circulatory, digestive, respiratory, immune, and reproductive systems. Students will develop a semester-long research project of their choosing in addition to completing other assignments and activities.

**Astronomy - The Solar System** (*Studevent-Hickman; Spring; ½ credit*)

This course offers an introduction to the solar system, our "cosmic town." We'll survey the objects that orbit our sun, with their respective satellites, and examine how we know what we know about them. We'll also address questions like, Where are we in the Milky Way? the universe? How did our solar system form, and when? Are there other solar systems like ours? While we will discuss basic physics principles and equations, math will be kept to a minimum.

## **World Languages**

### **World Languages Curriculum Overview**

It is the mission of the World Languages Department at St. Francis to prepare students for college and life by giving them the tools to effectively communicate orally and in writing with people of diverse ethnic, religious and cultural backgrounds.

When you enter the language classroom, you'll hear students conversing in Chinese, French or Spanish with each other and the teacher. These conversations frequently continue into the hallways between classes, creating a positive global atmosphere in the school.

Beginning with introductory-level classes, students are encouraged to use their language skills. We want students to become comfortable with speaking and writing in a second (or even a third) language. The best way to develop these skills is to speak and write a language daily. Language classes are anything but boring. Teachers use a variety of participatory, hands-on activities to motivate students so they can focus on communication.

Students also have the opportunity to travel abroad with their language teachers. In recent years, students have traveled to Peru, Switzerland, France and China. These trips allow students to become totally immersed in the language and culture and to experience daily life in another country first-hand. We also invite students to participate in the regional and state World Language Festival each year. Our students frequently distinguish themselves in a variety of academic and artistic world-language events.

The World Languages Department offers beginning, intermediate and AP courses in Chinese, French and Spanish, allowing interested and capable students to pursue a more in-depth study of the literature and culture of their chosen language(s).

St. Francis students are required to complete two consecutive years of the same language in order to graduate. Our graduates who complete four years of language study with us often report themselves extremely well prepared for college-level language courses.

### **World Language Course Offerings**

**Chinese I** (*B. Jones; 1 credit*)

In this class students will begin acquisition of spoken Modern Standard Chinese (or Mandarin) using the Rassias and TPR-Storytelling methods, learn the pinyin Romanization system, and begin to learn simplified Chinese characters. The student's part is to be willing to focus in class and add to the conversation. Students will learn to read and write Chinese using the pinyin system both in class and for homework, complete assignments to demonstrate improving proficiency in speaking, reading and writing Chinese, and complete projects that will increase their knowledge of Chinese culture and society.

**Chinese II** (*B. Jones; 1 credit*)

This course continues and advances the language skills learned in Chinese I. Students participate in daily reading activities, practicing practical conversation skills, and write in Chinese characters, with frequent drilling to improve listening comprehension and speaking skills. Students also complete projects on Chinese cultural topics.

**Chinese III** (*B. Jones; 1 credit*)

*Prerequisite: Chinese II; permission of the instructor*

This course continues and advances the language skills learned in Chinese I and II. The emphasis will be on conversational skills, reading of simple novels and more challenging readings in the language, and replacing materials with pinyin spelling with character-only readings. Students will also learn Chinese dictionary skills and acquire a deeper understanding and appreciation of the written Chinese character. Students will also work on multi-week projects and reports on Chinese cultural topics, enhanced with films and field trips. Students will enhance their knowledge of grammatical structure and improve their reading and writing skills in Chinese characters.

**French I** (*Buck; 1 credit*)

Bonjour et bienvenue à Français II! This course is intended to provide students with the framework to read, hear, understand, and communicate in French at a novice level (see [www.actfl.org](http://www.actfl.org) for guidelines). Integrating conversation, listening comprehension, grammar, culture in the Francophone world, and reading in French, this course will incorporate a variety of authentic materials and outlets with which to learn the language. The course will be taught in French as much as possible, and when necessary, in English.

**French II** (*Buck; 1 credit*)

This course will allow for continued rapid acquisition of new vocabulary, tools for communication, understanding of grammatical concepts and structures, reading comprehension and translation skills, and increased knowledge of French and Francophone cultures. At the conclusion of this course, students should be speaking, reading, writing, and listening at the novice-high level, according to ACTFL guidelines ([www.actfl.org](http://www.actfl.org)). Students are expected to participate actively in class discussions and activities daily and practice contributing by speaking French. The course will be taught primarily in French when at all possible, and in English when is necessary.

**French III** (*Buck; 1 credit*)

*Prerequisite: French II; permission of the instructor*



This is an intermediate level French course designed to continue to build upon skills in the five areas of foreign language learning: speaking, listening, reading, writing, and culture. It is intended to create a foundation for French IV/AP and will be conducted as a seminar mostly in French. At the conclusion of this course, students should be speaking, reading, writing, and listening at the intermediate-low level, according to ACTFL guidelines ([www.actfl.org](http://www.actfl.org)). Students are expected to participate actively in class discussions and activities daily and practice contributing by speaking French. The textbook is a great resource for doing so, but the course also draws from a variety of authentic (meaning in French, for French speakers) sources, such as films, music, radio broadcasts and podcasts, fables, literature, and news articles.

### **AP French/ Advanced French History, Culture, and Literature** (*Buck; 1 credit*)

*Prerequisite: French III; permission of the instructor*

This course is designed to encourage French language students' progression through novice and intermediate proficiency. At the conclusion of this course, students should be speaking, reading, writing, and listening at the intermediate-high level, according to ACTFL guidelines ([www.actfl.org](http://www.actfl.org)). It is intended to both prepare students for the AP French Language and Culture examination in May 2017 and allow for more in-depth study of French history, culture, and literature. As the course is the equivalent of an intermediate-level college French course, it is organized in seminar fashion. Students are expected to actively participate in and contribute to the daily discussions, and to challenge themselves. The course will double as a seminar on French and Francophone history and literature, students are expected to write, listen, read and speak at a minimum the intermediate proficiency. The class is conducted in French, and students are expected to speak in French when at all possible. *This course has a summer reading requirement.*

### **Spanish I** (*Katz; 1 credit*)

This class is the foundation course in Spanish. Students take their first steps in reading, writing, and understanding spoken Spanish. A variety of useful topics, including family, school, self, food and clothing, are presented. Emphasis is on listening and speaking skills. Students communicate in Spanish with each other and with the teacher, using role-playing, short oral presentations, conversation cards, and other small-group activities.

### **Spanish II** (*Katz; 1 credit*)

This course builds upon the foundation of communication skills begun in Spanish I with special emphasis on the past tenses. The topics covered include travel and vacation, celebrations and holidays, health and health care, and chores and pastimes. The students study Hispanic life and customs, with concentration on the history and geography of Spanish-speaking countries. Two culture-based readers written in Spanish about Spain and Mexico are used, along with articles about other Spanish-speaking countries. Emphasis continues to be on using the content to communicate in Spanish, with more concentration on reading and discussion than in Spanish I.

### **Spanish III** (*Katz; 1 credit*)

*Prerequisite: Spanish II; permission of the instructor*

This class advances students' abilities to accurately and effectively communicate orally and in writing in Spanish. More abstract topics – the environment, current events, the arts, jobs and

banking, among others – allow students to express themselves creatively. Students learn to state their opinions, explain likes and dislikes, refer to hypothetical situations, and persuade others. They are introduced to classical Spanish texts: *La Celestina*, *Lazarillo de Tormes* and *Don Quijote* as well as articles from Spanish-language publications.

### **AP Spanish Language** (Katz; 1 credit)

*Prerequisite: Spanish III, with a minimum grade of B, and permission of instructor*

This course continues to build on the skills learned in previous years of study, with particular emphasis on advanced conversation, reading, and formal writing based on the recommended syllabus for the AP Spanish Language examination. Students participate in daily conversation activities and oral presentations to help them focus on particular vocabulary and grammar topics, and write compositions every week. Students read and discuss fiction works by noted Hispanic authors. This course prepares students to take the AP Spanish Language exam in May. *This course has a summer reading requirement.*

### **AP Spanish Literature** (Katz; 1 credit)

*Prerequisite: AP Spanish Language, with a minimum grade of B, and permission of instructor*

The curriculum of this in-depth course is determined by the syllabus of the AP Spanish Literature examination. It requires extensive reading of literary texts dating from the Middle Ages to the present. Students will write a variety of literary-analysis essays, do oral presentations and learn more advanced vocabulary. *This course has a summer reading requirement.*

## **Transitions**

**The 9<sup>th</sup> grade Fitness, Health and Skills course and the 12<sup>th</sup> grade Senior Project** serve as bookends to the St. Francis education. The former provides a transition between middle school and the demands of high school; the latter serves as a culminating demonstration of the skills St. Francis students learn in their time here.

**The Fitness, Health and Skills course** takes the physical education and health requirement for high school graduation in Kentucky a few steps further. We ask the question: What do college-bound high school freshmen need to know? Then we spend a year answering it. Interwoven with a comprehensive fitness and health curriculum, we move from current events awareness to public speaking to analysis of our learning and communication styles.

The **Senior Project** is begun with a proposal process in the 11<sup>th</sup> grade year, includes significant research, and concludes usually in the spring of 12<sup>th</sup> grade with a presentation and a written component. The Project is intended to provide all St. Francis Seniors with the opportunity to devote concentrated effort and time to a project focused on that which interests them most, to develop those independent research skills which are more and more being expected of college-bound students, to experience the tensions and rewards of a public presentation of their work, and to demonstrate that their years at St. Francis have culminated in the maturation of the integrated and confident intelligence which it is the school's mission to encourage and affirm.

