

# ST. FREDERICK HIGH SCHOOL - COURSE LISTING

All classes indicated by an asterisk\* are available for college credit: ACT composite of 19, Eng 18, Math 19.

## LANGUAGES

### English 7

MYP English 7 is an introductory course for junior high English, which combines grammar, reading and writing, and builds a foundation in literature and writing that will continue into highschool. The course will focus on reading, writing, speaking, and critical thinking. The major genres covered will be Fiction, Nonfiction, Poetry and Drama.

### English 8

MYP English 8 is a junior high English course, which combines grammar, reading and writing, and builds a foundation in literature and writing that will continue into highschool. The course will focus on reading, writing, speaking, and critical thinking. The major genres covered will be Fiction, Nonfiction, Poetry and Drama.

### English I

English I is an introductory course for 9th grade, which builds the foundation in literature and writing that will be continued through the senior year. The course will focus on reading, writing, speaking, and critical thinking, using texts from across the world in various genres. The major genres covered will be Poetry, Fiction, Nonfiction, and Drama.

### English II

English II is a course which focuses primarily on British Literature. The course will continue to focus and build skills in reading, writing, speaking, and critical thinking, while covering the major genres of Poetry, Fiction, Nonfiction, and Drama. Additionally, research skills will be introduced and practiced throughout the year. The prerequisite for this course is English I.

### English III

Junior English is a literature-based course with an emphasis on American literature, research and critical writing. Students will be introduced to major American works and literary movements, spanning from Pre-Columbian to the present. In addition, students will broaden their research, writing and critical thinking skills through assignments designed to prepare them for college-level coursework. The prerequisite for this course is English II.

### English IV\*

Senior English is a writing class, emphasizing argument, analysis and synthesis. Students will be asked to write a research paper based on their career plans, and to read and critically examine a variety of texts. In addition, some students will prepare to take the AP English Language and Composition exam. This course is also offered through ULM for dual enrollment credit. The prerequisite for this course is English III.

### Spanish I

Spanish I is an introductory Spanish course designed for students who have not had a foreign language class. The course will focus on Spanish pronunciation, basic vocabulary and present tense grammar for basic conversation as well as some cultural aspects. This is the first Spanish language course offered to new students with no background in Spanish.

## **Spanish II**

Spanish II is an elementary Spanish course which builds on the foundation established in Spanish 1. The course will focus on reading, writing, understanding and speaking Spanish. The major grammatical topics covered in the course include the preterit tense, the pronominal system, and commands. The prerequisite for this course is credit for Spanish 1.

## **Spanish III\***

Spanish III is an Honors course not required for high school graduation. The main goal of this course is to increase the student's overall ability in the Spanish language with an emphasis on communicating in Spanish, primarily through speaking, reading, writing and listening activities. Students are required to conduct oral presentations. Grammar contexts include review of the present tense and focus on preterit and imperfect tenses used in conversation. The prerequisite for this course is Spanish II with a minimum of 3.3 GPA in the class.

## **Spanish IV\***

Spanish IV is an Honors course not required for high school graduation. The main goal of this course is to build on the student's overall abilities in the Spanish language. The main emphasis is on communicating in the Spanish language. The course encourages assimilation of vocabulary and grammatical constructs with emphasis on recognizing and utilizing new vocabulary and higher level grammar including imperfect, subjunctive, future, perfect and conditional tenses. The prerequisite for this class is Spanish III with a minimum of 3.3 GPA.

## **Spanish V**

Spanish V is an Honors course not required for high school graduation. This course does not offer Dual Enrollment credit. The main goal of this course is to build on the student's overall abilities in the Spanish language and provide daily practice opportunities in different contexts for communication. Students also focus on language needed for travel and immersion to Spanish-speaking countries. The prerequisite for this course is Spanish IV with a 3.3 GPA.

# **INDIVIDUALS AND SOCIETIES**

## **Civics**

Civics is a course that deals with all aspects of American government and examines the role each citizen plays in the democratic process. Topics covered include a variety of subjects ranging from the structure of government to the individual duties and responsibilities of citizenship.

## **United States History\***

United States History offers a full survey of American History. The course covers material covering pre-Columbian America through the current events of the 21st century. During the survey, the growth of the United States as a world power is examined along with the events that shaped our nation.

## **World Geography**

World Geography is a survey of the physical and cultural geography of the world. The course covers landforms, and basic geology, as well as an overview of the major religions and government systems of the world. Primarily, the course is organized by continent, and study of each region includes language, culture, and current events.

## **World History\***

This year-long course provides an introduction to major world events, people, and places in history. The course begins by examining the concept of history, the writing of history, and the interpretation of history. The course will progress

through an examination of both primary and secondary sources from various time periods in an effort to understand historical events within their original contexts. There are no prerequisites. Dual enrollment credit is available for qualified students.

### **Religion 7**

Religion 7 is a course which helps to build on students' appreciation of God, faith, Church, and religion. The course will include general Catholic beliefs and understanding, current events, and a focus on our goal of adhering to the principles and practices of our Catholic Faith.

### **Religion 8**

Religion 8 is a course that continues to help students build on their appreciation of God, faith, Church, and religion. This course will include general Catholic beliefs and understanding, current events, helping students to become more aware of their moral decision making, and a focus on our goal of getting to Heaven and growing in our faith. and a focus on our goal of adhering to the principles and practices of our Catholic Faith.

### **Religion III: Church History**

This course centers on the development of the Church from its origins to the present. We will study the story of God's intervention into human history from the time of the earthly life of Christ to the present day. We will study how God sent the Holy Spirit to act through the Church and her members with special emphasis given to the role of Saints and Popes to further the mission of the Church into the world.

### **Religion IV: World Religions**

This course encourages seniors to explore the people, dimensions, and religious principles of the key religions of the world. It will also help them gain increased understanding and awareness of the insights and techniques which will assist them in relating to others and prepare them for Christian life beyond high school.

## **SCIENCES**

### **Anatomy & Physiology**

Anatomy & Physiology is a study of the human form and function. Students will gain a deeper understanding of (1) the levels of organization, and support and movement, (2) Integration and coordination, (3) transport, absorption, and excretion, and (4) the human life cycle. This class will place a strong emphasis on problem-solving, discovery, and application. The prerequisite for this course is Biology I.

### **Biology**

Biology I is an introduction to the study of biology. Students will gain an understanding of (1) global ecosystems and the environment, (2) coordinated body systems, (3) DNA and genetics, and (4) theories of change and global health. This class will place a strong emphasis on problem-solving and discovery. The prerequisite for this course is Life Science.

### **Biology II\***

Biology II is a continuation of the study of biology. Students will gain a deeper understanding of (1) the cell and cellular genetics, (2) biological diversity, (3) plants and animals: form and function, and (4) ecology and conservation. This class will place a strong emphasis on problem-solving and discovery. The prerequisite for this course is Biology I.

## **Chemistry I**

Chemistry I is an introduction to inorganic chemistry. Students will gain an understanding of (1) the properties of matter, (2) the atom and its structure, (3) chemical formulas, equations, and reactions, and (4) gases. This class will place a strong emphasis on problem-solving. The prerequisite for this course is Algebra I.

## **Chemistry II\***

Chemistry II builds upon the concepts learned in Chemistry I. Students will revisit many of the concepts learned in Chemistry I but will do so at higher levels of learning (apply, analyze, evaluate, and synthesize). Additional topics addressed include (1) solution and nuclear chemistry, (2) acids, bases, salts, and buffers (3) stoichiometry and (4) reaction kinetics. The prerequisite for this course is credit for Chemistry I and Algebra II. Options: Honors and Dual Enrollment (4 semester hours – Louisiana Tech)

## **AP Chemistry**

AP Chemistry provides students with a college-level foundation to support future advanced coursework in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore content such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium. The prerequisite for this course is credit for Chemistry I and approval of the instructor.

## **Physics I\***

Physics I is the study of the relationship between matter and energy. The course follows the logical sequential development of major physics principles focusing primarily on the study of Newtonian mechanics during the first semester and Electricity & Magnetism, Optics, and Light during the second semester. The prerequisite for this course is credit for Algebra II and credit for or concurrent enrollment in PreCalc/ Advanced Math. Options: Honors and Dual Enrollment (6 semester hours – Louisiana Tech)

## **Physics II\***

Physics II builds upon the concepts learned in Physics I. Students will revisit many of the concepts learned in Physics I but will do so at higher levels of learning (apply, analyze, evaluate, and synthesize). Additional topics addressed include (1) thermodynamics, (2) fluid dynamics, (3) advanced and complex circuits, and (4) quantum mechanics and special relativity. The prerequisite for this course is credit for Physics I. Options: Honors and Dual Enrollment (6 semester hours – Louisiana Tech)

## **AP Physics**

AP Physics is an algebra & trig-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics: kinematics, dynamics, circular motion and gravitation, energy, momentum, simple harmonic motion, torque and rotational motion, electric charge and electric force, DC circuits, and mechanical waves and sound. The prerequisite for this course is credit for Physics I and approval from the instructor.

## **Physical Science (8)**

8th grade Physical Science is a course designed to serve as a foundation for other high school science courses. It will emphasize the basic laws of chemistry and physics. Laboratory, problem solving activities, and use of the scientific method will be utilized to address the curriculum. There is no prerequisite for this course.

# **MATHEMATICS**

## **Pre Algebra**

Pre-Algebra is an introductory course and serves as a prerequisite for Algebra I. Students are introduced to integers, fractions, linear equations, step equations, and square roots. In addition, students learn to solve equations with variables.

## **Algebra I**

This is a required course, usually taken at the 8th-grade or freshman year of high school. It is the prerequisite for both Algebra II and Geometry. Material taught includes algebraic equations using variables, linear equations and graphs, exponents, and irrational numbers.

## **Algebra II**

Algebra II is an intermediate mathematics course offered at SFHS. This course is two (2) semesters taught in sequence during the Fall and Spring. Algebra II continues elementary algebra instruction from Algebra I. Algebra is the basis for any study in the fields of science, engineering, medicine, economics, and computer science, among other disciplines. This course covers simplifying expressions and solving equations and inequalities with single and multiple variables, linear and nonlinear relations and functions, and complex numbers along with applications.

## **Calculus**

Calculus of a Single Variable is a capstone mathematics course offered at SFHS. This course is two (2) semesters taught in sequence during the Fall and Spring. Calculus is integral in the understanding of science, engineering, economics, and computer science, among other disciplines. This calculus course covers the differentiation and integration of functions of one variable along with applications.

## **Geometry**

Geometry is an introductory mathematics course offered at SFHS. This course is two (2) semesters taught in sequence during the Fall and Spring. Geometry is the branch of mathematics devoted to the study of distance, shape, size and relative position of figures. This course will focus on Euclidean geometry. Geometry is essential for any study in the fields of science, engineering, medicine, construction, and design among other disciplines. This course covers understanding and application of basic geometric shapes, logical progression of thought, constructions of geometric relationships, and conditional probability along with applications.

## **Pre-Calculus\***

Pre-Calculus is a two-semester course--College Algebra and Trigonometry--emphasizing basic equation solving, graphing, and application of algebraic skills. In semester one, students will solve and graph linear, polynomial, quadratic, exponential, and logarithmic equations; the second semester focuses on trigonometric terms, application and graphing of basic trigonometry functions, and the laws of sines and cosines. Prerequisites for this course are Algebra II and Geometry. Dual enrollment credit is available for qualified students.

## **Probability and Statistics\***

This course is an overview of statistics for students without a calculus base. It includes an introduction to descriptive statistics, probability, binomial and normal distributions, hypothesis testing, correlation and regression. Dual Enrollment Math 1016 is available with the prerequisite of a "C" or better in Math 1011.

## **ARTS and DESIGN**

### **Art I**

This course supplies the student with a foundation for developing perception in the visual arts. This course includes the elements and principles of design, color theory, and painting. The course is for art students and those interested in going beyond the basics in learning about art.

### **Art II**

This course includes advanced application of the principles mastered in Art I. Students work with most of the following: PrismaColor, advanced drawing with pen and pencil, calligraphy, acrylic painting, mosaics and collage. Students who are serious about their study of art should schedule this course. Art I is a prerequisite for Art II and may not be scheduled concurrently.

### **Art III**

The prerequisite for this course is Art II, with approval from the department head. This course is recommended for artistically talented students who are interested in a career in art and includes advanced application of principles and techniques mastered in Art II. Emphasis is placed on creating a portfolio for art school.

### **Art IV**

The prerequisite for this course is Art III, with approval from the department head. This course is for serious art students and students planning a career in art. This course includes very advanced application of art techniques and photography. Students will complete a portfolio of finished art for college or art school.

### **Design 7**

Design 7 is a required one-semester course for all 7th-grade students. The purpose of this course is to learn and apply the principles of design. Many of the lessons in this course are interdisciplinary and require students to think critically and creatively to solve problems.

### **Design 8**

Design 8 is a required one-semester course for all 8th-grade students. The purpose of this course is to apply the principles of design to find digital solutions to real-world problems. Students will work with unmanned aircraft, CAD, 3D printing, robotics, and basic coding.

### **Digital Design**

Digital Design is a one-year elective that builds on principles learned in Design 7 & 8. Subjects and projects include website design, drone programming and operation, coding, 3D printing, and computer aided design (CAD).

## **ELECTIVES**

### **ACT Prep**

ACT Prep is a course designed to teach test-taking strategies and review some of the content area skills that are on the exam. Students spend one semester in Math and Science, and one semester in Reading and English. The course is

primarily designed for sophomores and juniors. Prerequisite: Completion or concurrent enrollment in Algebra II and English II.

### **CAD I (Computer-Aided Design)**

This class is intended for students to learn how to make projects using a 3D printer. In this class, the student will learn how to make 2D designs using a Solid Modeling software, like Tinkercad, then printing prototypes on a Replicator + or Replicator 5th Generation 3D printer. In addition, students will also learn to create and reproduce various signs, designs, and crafts using a Graphtec CE 6000 Vinyl cutter. There is no prerequisite for this course.

### **CAD II (Computer-Aided Design)**

CAD II is a continuation of CAD I. More complicated projects will be designed and printed using various software like Sculptris. Students will also get an opportunity to print projects using silver or copper rather than using the PLA filament exclusively used in CAD I. In addition, students will continue to work on more complicated projects and designs on the vinyl cutter. The prerequisite for this course is credit for CAD I.

### **Coding I**

Getting Started with Coding is a beginning level course in learning the general-purpose programming language of "Python." The students will use a unique Drag-to-Text Toolkit™ in CodeSters that provides interactivity so they can make engaging projects right away. This course is not designed to make students computer programmers but does allow them to learn the process of inputting instruction into a computer device that results in an action, or output. There is no prerequisite for this course.

### **Engineering I**

Engineering I introduce students to the world of engineering. During the first semester, students will be introduced to the roles of engineers in society, ethical dilemmas faced by engineers, different engineering fields, and the engineering design process with projects. In the second semester, students will build a robot and develop the coding for it to accomplish specific tasks. There are no prerequisites.

### **Sport Psychology**

Sport Psychology will be a unique opportunity to be exposed to sport/physical activity from the standpoint of psychological aspects contributing to participation and associated psychological outcomes of participation. This course examines psychological theories and research and their application to the sport/physical activity-related affect, behaviors and cognitions of participants as well as the individual and environmental factors which shape these outcomes.