Revised 08-2020

SAINT PAUL'S ELECTIVES

Accounting I (10th—12th grade)
This course is an introduction to the basic concepts and standards underlying financial accounting systems. Several important concepts will be studied in detail, including revenue recognition, inventory, long-lived assets, present value, and long-term liabilities. The course emphasizes the construction of the basic financial accounting statements—the income statement, balance sheet, and cash flow statement—as well as their interpretation.

American Sign Language (10th –12th grade)
Introduction to American Sign Language (ASL) will cover the beginning fundamentals of ASL and the key aspects of culture in the Deaf and hard of hearing communities. Because of the rising necessity for sign language in the fields of medicine, law, law enforcement, and education, the overall objective for the course is to provide students with a rudimentary knowledge of correct hand structures, use of facial expressions, and vocabulary, that will develop the foundation necessary for basic signed conversation.

Agriscience I (9th—12th grade) New 2020-2021
This class provides students with basic knowledge of agriculture and its history and the science applications in agriculture. This course includes units in animal science, soil science, plant science, agricultural mechanics, basic carpentry, food science technology, and agricultural leadership.

Art I (9th—12th grade)
Art I is an introduction to elements of art and design. The course covers line, shape, form, and value. It includes basic drawing and design using a variety of media. The course is open to students interested in art as a credit course. Students purchase some personal art supplies.

Art II (10th—12th grade)
Art II is a continuation of study of elements of art and design. This course covers color, space, texture, and movement. It includes an introduction to three dimensional art including ceramics. It is also an introduction to painting and drawing with emphasis an on design through a variety of media. Students purchase some personal art supplies. Out-of-class projects are required.
Prerequisite: Art I

Art III H (11th—12th grade)
Art III emphasizes elements of design and composition. This course is a continuation of drawing, painting, printmaking, and sculpture. Students select four areas of specialization including but not limited to the following: two dimensional media, three dimensional media, printmaking, photography, architecture, interior design, etc. Quarterly reports and out-of-class projects required. Students purchase some personal art supplies.
Prerequisite: Art I and Art II
Permission of instructor required for enrollment

Art IV H (11th - 12th grade)
Students select four areas of specialization including but not limited to the following: two-dimensional media, three-dimensional media, printmaking, photography, architecture, interior

design, etc. Quarterly reports and out-of-class projects required. Students purchase some personal art supplies.
Prerequisites: Art I, II, and III
Permission of instructor required for enrollment

Art History AP (10th - 12th grade)

Students will be presented with a college-level introduction to Art History, utilizing slides and lectures to teach about the relevant cultures that impacted the art throughout history from pre-history to modern times. The course focuses on aesthetics, concepts, and criticisms along with philosophical ideas that were relevant during these times. Students should be able to conduct research online and draft papers as assigned by the instructor to supplement the teaching from the slides and text.
Students are required to take the AP Art History Exam at the end of the course.
There is a cost associated with this exam.

Athletic PE (9th - 12th grade)

This class is strictly for St. Paul's School athletic team members. It is designed to have athletes complete their in-season and off- season training programs. These programs consist of flexibility, speed training, weight training, resistance training, team building activities, and health and wellness.
Prerequisite: One year of H & PE

Biology AP (11th – 12th grade)

The AP Biology Course is a year-long course that provides students with an opportunity to develop a conceptual framework for modern biology, emphasizing applications of biological knowledge and critical thinking to everyday life. This is a college level course, so it is expected that the students come to class prepared and motivated to work in a fast-paced environment in order to build a thorough understanding of science and Biology.
Students are required to take the AP Biology Exam at the end of the course.
There is a cost associated with this exam.
Prerequisite: Biology H

Biology II / Biology II H (11th—12th grade)

This is a lecture-laboratory course providing an introduction to human anatomy and physiology. Topics in the first semester include cells, tissues, organs, and the integumentary, skeletal, muscular, and nervous systems. The second semester will cover the circulatory, respiratory, digestive, excretory, endocrine, and reproductive systems. Labs will include the use of microscopes to understand the microscopic anatomy of the body and dissections to understand macroscopic anatomy. The dissections are an important component of the course and will be required of anyone who registers for the course.
Prerequisite: Biology I

Band (8th—12th grade)

Students concentrate on music as it applies to the concert bands and solos. Membership in the marching band is required. This course offers individualized instruction for those who wish to become more proficient on an instrument. Perfecting reading music, ear training, conducting, music theory, drill work, and computer aided instruction are all part of the curriculum. Students are also required to audition for District Honor Band and are expected to supply most instruments. Band 8-12 requires out of school time. This class meets after school and is considered an 8th period on the student's schedule.

Biomedical Sciences (Project Lead The Way) (9th—12th grade)

- **Principles of Biomedical Sciences—BioMd I** (first in PLTW series) Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia and infectious diseases in this full-year course. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, medicine, research processes and bioinformatics. Key biological concepts including homeostasis, metabolism, inheritance of traits and defense against disease are embedded in the curriculum. Engineering principles including the design process, feedback loops and the relationship of structure to function are also incorporated. This course is designed to provide an overview of all the courses in the Biomedical Sciences Program and lay the scientific foundations for subsequent courses.

- **Human Body Systems—BioMd II** (second in PLTW series) Students examine the interactions of body systems as they explore identity, communication, power, movement, protection and homeostatic. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real-world cases and often play the role of biomedical professionals to solve medical mysteries.
  Prerequisite: BioMd I

- **Medical Interventions—BioMd III H**(third in PLTW series) Students investigate a variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the life of a fictitious family. The course is a “How-To” manual for maintaining overall health and homeostasis in the body. Students explore how to prevent and fight infection; screen and evaluate the code in human DNA; prevent, diagnose and treat cancer; and prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.
  Prerequisite: BioMd I

- **Biomedical Innovations—BioMd IV H**. Students apply their knowledge and skills to answer questions or solve problems related to biomedical sciences. Students design innovative solutions for the health challenges of the 21st century.
  Prerequisite: At least two of the previous BioMd courses

Chemistry II / Chemistry II H (12th grade)

The Chemistry II course is designed to expand and enrich some of the topics covered in first year chemistry while introducing new concepts. Topics for Chemistry II include organic, nuclear, thermodynamics, kinetics, reaction rates, equilibrium, solutions, and electrochemistry. This course can be taken as an elective or in place of Physics.
Chemistry II Honors follows the same general outline as Chemistry II but the pace is faster and the topics are covered in greater detail.
Prerequisite: Chemistry

Classical Literature H (11th – 12th grade)
This course is an honors elective offered by the English Department, designed for students who enjoy mythology and epic stories of heroes, battles, quests, and the origin and survival of nations. It is open juniors and seniors who have maintained A's and B's in English and who have the approval of the teacher of this course (2017-18: Brother Rich). Students seeking admission to this course need to be committed to daily reading assignments and to helpful participation in class discussions.
Permission of instructor required for enrollment

Creative Writing (10th – 12th grade)
This course is an elective designed for students who enjoy the art of writing. Students will concentrate on the study of many different genres of writing and build on the skills developed in the English core curriculum. Students will take part in a collaborative effort to help one another improve writing skills. Students will both write and collect pieces of writing from other students to be placed in a student-produced literary magazine.

Economics / Finance (11th –12th grade)
Economics is an introduction to basic economic principles and theory relating to problem analysis, structure of our institutions and the formulation of public policies. Emphasis is placed on the broad overall performance (macro-analysis) of the economy with concentration in such areas as incomes, employment and output, economic stability and growth, fiscal and monetary policy, and capital markets.
Finance introduces the basic financial principles of financial management. Course topics include cost of capital, interest rate determination in competitive markets, the capital asset pricing model, capital budgeting, risk, return, and bond and stock valuation. Students will also be introduced to the case study method in finance as well as stock market simulation platforms.

Engineering (Project Lead the Way)

- **Introduction to Engineering Design—PLTW IED (9th – 12th grade)**
  Designed for 9th or 10th grade students, the major focus of IED is the design process and its application. Through hands-on projects, students apply engineering standards and document their work. Students use industry standard 3D modeling software to help them design solutions to solve proposed problems, document their work using an engineer's notebook, and communicate solutions to peers and members of the professional community.

- **Principles of Engineering—PLTW POE (10th – 12th grade)**
  Designed for 10th or 11th grade students, this survey course exposes students to major concepts they'll encounter in a post-secondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions.
  Prerequisite: PLTW IED
- **Civil Engineering and Architecture—PLTW CEA H (11th – 12th grade)**
  Students learn about various aspects of civil engineering and architecture and apply their knowledge to the design and development of residential and commercial properties and structures. In addition, students use 3D design software to design and document solutions for major course projects. Students communicate and present

solutions to their peers and members of a professional community of engineers and architects.
Prerequisite: IED and POE

- **Digital Electronics—PLTW DE H (11th – 12th grade)**
  Digital electronics is the foundation of all modern electronic devices such as mobile phones, MP3 players, laptop computers, digital cameras and high-definition televisions. Students are introduced to the process of combinational and sequential logic design, engineering standards, and technical documentation.
  Prerequisite: IED and POE

- **Engineering Design and Development—PLTW EDD H (12th grade)**
  This is the capstone course in the PLTW high school engineering program. It is an open-ended engineering research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem by applying an engineering design process.
  Prerequisite: IED, POE, and CEA or DE or CSP

- **Computer Science Essentials—PLTW CSE (9th—12th grade)** No prior programming knowledge is required for CSE. Students will develop basic programming skills starting with block-based languages such as MIT's Scratch and AppInventor and will move to Python, a text-based language. Projects in this course include making Scratch mini-games, AndroidOS apps, and text-based Choose-Your-Own-Adventure games. They will apply computational thinking practices, build their vocabulary, and collaborate just as computing professionals do to create products that address topics and problems important to them. Computer Science Essentials helps students create a strong foundation to advance to AP Computer Science Principles and beyond.

- **Computer Science Principles AP –AP PLTW CSP (10th—12th grade)** In this course, students will delve deeper into Python as they apply their skills to image manipulation, turtle graphics, and data interpretation and representation. Overarching computational concepts of cybersecurity, "Big Data," and Internet protocols are also covered. This course aims to develop computational thinking, generate excitement about career paths that utilize computing, and continue students' studies in computer science. AP-CSP helps students develop programming expertise and explore the working of the Internet. Projects and problems include visualization of data, cyber security, robotics, and simulation. The course aligns with CSTA 3B standards. Students may earn college credit through the AP exam.
  Students are required to take the AP Computer Science Principles exam at the end of the course.
  There is a cost associated with this exam.
  Prerequisite: Successful completion of CSE

- **Computer Science A CSA (11th—12th)**
  AP Computer Science A is a college-level introductory computer science course. In AP-CSA, students are introduced to Java, with emphasis placed on understanding the class and object structure of the language. Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures in the Java language. In addition to precision of expression, Java supports important elements of problem solving,

including object-orientation, abstraction, and encapsulation. The use of Java also allows students to test potential solutions to problems by running programs. Students may earn college credit through the AP exam.
There is a cost associated with this exam.
Students are required to take the AP Computer Science Principles exam at the end of the course.
Prerequisite: Successful completion of AP-CSP

Entrepreneurship (12th grade)

Entrepreneurship is designed to equip students with introductory skills, which help prepare them to organize and run a business. Business terminology, basic entrepreneurship concepts, and fundamental operating principles are emphasized. Through this course, students are involved with activities such as developing business plans and applying economic concepts to enterprise management. They will analyze supply and demand and understand how it affects price and profit. They will also learn to calculate operational expenses in determining profit. Topics concerning ethical problems related to the workplace will be discussed, as well as solutions for some of these problems. Finally, the student will be introduced to the concept of social entrepreneurship.
Prerequisite: Economics / Finance
Permission of instructor required for enrollment

Environmental Science (10th – 12th grade)

Environmental Science will begin with a study of fundamental concepts of ecology - how natural systems work and how they change over time. This will be coupled with a survey of the earth's major biomes. The nature of the relationships of various human cultures with the natural world will be examined. The class will monitor environmental quality of the Northshore. Other topics include human impact on the earth in the areas of population, resource use and management, and pollution. The concept of a responsible stewardship of the earth will place emphasis on the role of the individual in the development of new attitudes and technologies as we make the transition to a more enlightened relationship with the natural world.

Guitar (10th – 12th grade)

This course offers individualized instruction for those who wish to learn to play the guitar. This course concentrates on learning the guitar through the playing of songs.
Students are expected to supply their own guitar

Health and PE I, II, III, IV, V (8th – 12th grades)

Two years of Physical Education are required for high school graduation. One year must be Health and PE. Physical education will be divided into one semester of health education and one semester of physical education. Health education will consist of a variety of topics focusing on the health triangle which consists of physical health, mental/emotional health, and social health. Topics consist of decision making skills, goal setting, tobacco, alcohol, and drug education, muscular and skeletal systems, as well as other major body systems, physical activity, and nutrition. Physical education will take a more detailed look at the five components of physical fitness. A major emphasis will be placed on improving and maintaining students overall health and learning skills in physical fitness and nutrition that can be used for a lifetime. Team sports may be played at the teacher’s discretion and will focus on rules and team building activities.

Introduction to Athletic Training (11th – 12th grade)
This is a lecture-laboratory course available to students. The course will require field experience work in addition to classroom work. The first semester course will emphasize the basic fundamentals used by an athletic trainer. Major emphasis will be given to prevention and immediate care of athletic injuries dealing with anatomy, injury systems, and specific tests to help make preliminary evaluation of injuries. The second semester course will emphasize secondary evaluation and rehabilitation of athletic injuries by the athletic trainer. Major emphasis will be given to knowledge of numerous modalities and therapeutic techniques used to successfully rehabilitate an injured athlete. This course would be beneficial to any student thinking about pursuing any allied health profession.
Prerequisite: Biology I
Permission of instructor required for enrollment

Introduction to Business (9th – 10th grade)
Business is an introductory level course that demonstrates how the business economy operates and ties in with personal resource management. Students will learn the basis of our economic environment and business operations including government in our economy and small business management. Students will be prepared to make decisions as consumers, wage earners, and participants in the economy.

Journalism (10th – 12th grade)
This is a "hands-on" course giving the student a detailed experience in the production of school publications such as the school newspaper and other school related programs. Emphasis is on the responsible news writing and reporting necessary to produce a digital, online newspaper. The class includes extensive use of publication software and writing organization as dictated by specific publication genres.

Law Studies I (10th – 12th grade)
The first semester course is an introduction to our criminal and civil court systems, juvenile law, and landmark decisions of the United States Supreme Court. The second semester course focuses on such personal law topics as contracts, insurances, checking accounts, income tax preparations, marriage and divorce laws and wills.

Marketing / Management (10th –12th grade)
Marketing is an introductory course of the traditional marketing principles and concepts. Students will learn the marketing aspects of a business dealing with products, sale, promotions, and distributions. Special emphasis is placed on product viability based on research and correlation into a marketing plan.
Management introduces the functions of management. The course focuses on the theory and fundamental concepts of management including planning, organization, leadership, and control. Special emphasis is placed on the evolution of management thought and practice and its application in a global environment.

Media Production I (10th –12th grade)
The media production class will teach students the execution of media production such as newscasts, short films, short documentaries, and commercials. Students will learn how to shoot efficiently for post-production, edit shot material into a coherent production, apply practical effects in post-production, perform and create as journalists and reporters in order to produce student news, set up the lighting and green screen in order to create a usable

background for post production effects, appreciate the value of excellent sound by having an acceptable understanding of how to capture the on-set sound, etc.
Permission of instructor required for enrollment

Media Production II (11th – 12th grade)

Media Production II is a class for students who want to move forward in the area of film production. The class will work as a project based class where students can create a bigger project each semester. The goal will be to create a short film (documentary and fiction) within each semester. Students will also assist with training the Media Production I class and Guerilla Wolves members. The class will be during the same period as Media production I; therefore, MPII students are small in number and must be invited to register for the class.
Prerequisite: Media Production I
Permission of instructor required for enrollment

Music Appreciation (Fine Arts Survey) (9th – 12th grade)

This class will cover music from ancient Greece to present day. The course will not only cover classical music but also pop-music and how they relate to each other. We will also discuss musical phrasing and form in music. The goal of this course is not only to expand our skills as listeners, but also redefine what we consider music to be, in the process stimulating a fresh approach to our own diverse musical traditions. This class also will be a survey of classical, popular, and folk music traditions from around the world. In addition, the role of music as ritual, aesthetic experience, mode of communication, and artistic expression is explored.

Music Theory I (11th – 12th grade)

This course is open to experienced instrumental musicians and vocal musicians. This course will use a historical approach to teaching music theory. Students will be expected to read full orchestral scores, compose original music that will be performed, analyze aural examples of varied repertoire of music ear training. We will also discuss musical phrasing and form in music and is designed to enhance the overall reading and playing skills of the musician. The curriculum will include both music theory and music history classifying music by its genre or style and by historical period.
Permission of instructor required for enrollment

Percussion I, II (9th – 12th grade)

This course offers individual instruction in playing drums. Concentration is centered on learning drums through playing songs and cadences used by the Marching band, as well as an in depth study of the drum set and set styles such as rock, jazz, funk, reggae, and others including standard drum rudiments and rudimentary exercises.
Percussion III, IV (Restricted to St. Paul's Marching Wolves Drum line)

Petroleum Engineering (11th – 12th grade)

The petroleum engineering course provides fundamental knowledge of our offshore Gulf of Mexico petroleum environment (shelf and deepwater) and encompasses the following: geology, exploration, development, and production (from processing to the consumer's use). The course also delves into project economics and project management. Marine technology is integrated into the curriculum as students create and compete with remotely operated, underwater vehicles.

Philosophy (11th – 12th grade)
This course will provide the student with a general survey of philosophical thought, including basic epistemology, anthropology, metaphysics, and ethics. The big questions of life will be examined: Why is there something rather than nothing? Why do I exist? How do I determine right from wrong? How do I know that I know? Students will examine what it means to be human and how to achieve the goal and purpose of human life: happiness. The style of this class will be heavily concentrated on reading and discussion.

Spanish III (9th – 12th grade)
Spanish III is an elective course in Spanish as a second language. The class is conducted exclusively in Spanish. Students are expected to understand, process, and express complete and meaningful ideas communicatively. There is a strong emphasis in interactive oral communication using pair and group settings. Class materials are taken and prepared from the recreational, social, and cultural life of native Spanish speakers (TV commercials, soap operas, movies, music, magazines, books, etc.).
Prerequisite: Spanish I, II

Spanish IV H (10th – 12th grade)
Spanish IV is an elective Honors course in Spanish designed to further the student's understanding and use of the Spanish language and the culture of the Hispanic world. The class is conducted exclusively in Spanish. Interactive oral communication is emphasized in the class setting. Frequent research and writing projects are required.
Prerequisite: Spanish III

Spanish V H (11th – 12th grade)
This is an Honors course in Spanish as a second language. Students continue working on their individual strengths and weaknesses to become successful users of Spanish as a second language. The use of Spanish is mandatory throughout the class. Extensive reading and writing assignments in Spanish are an integral part of the learning process. Class materials are taken and prepared from the recreational, social, and cultural life of native Spanish speakers (TV commercials, soap operas, movies, music, magazines, books, etc.).
Prerequisite: Spanish IV

Statistics AP (11th – 12th grade)
Students will discover concepts of statistics while working through "laboratory" experiences. The traditional lectures will be supplemented by a program that requires active participation of the students. These activities are organized around several major topics: exploring data, relating data collection, and analysis to the solving of real problems, randomness, sampling distribution, estimation and hypothesis testing, sampling error, confidence interval and modeling the relationship between 2 variables especially through the use of least-squares regression.
Students are required to take the AP Statistics Exam at the end of the course. There is a cost associated with this exam.
Prerequisite: Algebra I, II and Geometry

Theater I (9th – 11th grade)
- Introduction to multiple aspects of Theater, from Greek theater and Shakespeare to several modern playwrights and their styles
- Introduction to the basics of play structure and types of shows
- Introduction to basic stage terms; basics of scene, costume, light, and sound designs.

- Acting exercises will include an introduction to scene work and improvisation skills through improv games; developing skills to analyze a script and a character, and begin to work on objectives, actions, and obstacles.
- Students will have opportunities to be involved (as a cast or crew member) in productions; including the performance of a large scale drama and musical each year, along with other performances throughout the year, providing several opportunities for students to enact what they are learning. (Most rehearsals and shows will occur outside of class time).

Theater II (10th – 12th grade)

- Acting work that features a more detailed approach to more complex scenework and monologue work
- A focused look at the acting technique of Stanislavsky
- Continued use of acting and improv exercises through improv games; advanced script analysis.
- Development of voice and movement skills and implementing them into scene work
- Audition techniques for stage and film, along with basic film acting techniques
- Continuing to work on set design, including some minor set building; work on lighting and sound design, culminating in a performances of one act plays (instructor assigned)
- Students will have opportunities to be involved (as a cast or crew member) in productions; including the performance of a large scale drama and musical each year, along with other performances throughout the year, providing several opportunities for students to enact what they are learning. (Most rehearsals and shows will occur outside of class time).
  Prerequisite: Theater I

Theater III (11th – 12th grade)

- Advanced acting studies
- Focus is on the technique of Stella Adler, implemented in advanced level scenework and monologues
- Film and audition techniques
- Students will learn directing techniques and apply them in scenes with their peers
- Continued work on improvisation through improv games
- Continuing to work on set design, including some minor set building; work on lighting and sound design, culminating in a performances of one act plays (instructor assigned)
- Students will have opportunities to be involved (as a cast or crew member) in productions; including the performance of a large scale drama and musical each year, along with other performances throughout the year, providing several opportunities for students to enact what they are learning. (Most rehearsals and shows will occur outside of class time).
  Prerequisite: Theater II

Film Studies (11th – 12th grade)

- The course will watch and review several films throughout history, and through the use of open class discussions and essays, evaluate their place and their reflection of their time periods and their ties to the cultural and historical events of their times.
- Introduction to several major directors and their works, discussing the varied uses of theme, camera work, set design, and style of each

- An in-depth look at the process of making a film, and the various roles that crew and cast all have in its creation
- Review films from several genres, including dramas, tragedies, comedies, documentaries, and musicals, and discuss the structure of each.

Yearbook (10th – 12th grade)
The Yearbook course includes photography, layout, design, and computer presentation of copy fundamentals. Admission to course is by permission of instructor only. Students must be able to work independently on assignments.
Out of class time is required
Permission of instructor required for enrollment

Online Courses:
Students may enroll in various online courses not offered at St. Paul's as substitutes for offered electives. Permission of the counselor and Academic Assistant Principal are required. Fees usually apply for these online courses.