

Shrewsbury High School
64 Holden Street
Shrewsbury, Massachusetts 01545
Office of the Principal



Memorandum

To: Dr. Joseph Sawyer
From: Todd Bazydlo
Date: December 28, 2018
Re: Proposed Changes to the 2019-2020 HS Program of Studies

I am pleased to present proposed changes and additions to the *Program of Studies* for the 2019-20 school year. The majority of the changes presented within this document are in response to the growing demands of our diverse school population and align with current educational research. I look forward to providing the School Committee more detail regarding the revisions listed below at the January 9 meeting.

Thank you for your consideration and support.

Family and Consumer Sciences Department

1. *Mediterranean Cuisine* will be offered during the 2019-2020 school year; *Foods of the World* will not be offered during the 2019-2020 school year.

Foreign Language

1. Add new course: *AP Mandarin Chinese*

This course is designed for those students who have attained a high degree of proficiency in Mandarin Chinese and who are interested in completing studies comparable in content and difficulty to a full-year college level course. The goal of the course is to prepare students for the Mandarin Chinese AP Language examination by emphasizing the basic objectives of proficiency in listening, speaking, reading, and writing. All forms of writing are emphasized, especially the directed and the open-ended question. Weekly journals and critical writing pieces are included. Students hone listening and speaking skills through repeated practice in the form of dialogues, skits, interviews, and directed questions. Picture sequences are also used to practice for the exam, and grammar is reviewed, fine tuned and applied in authentic communicative situations. Students are expected to take the Advanced Placement Exam in May. This class is conducted entirely in Mandarin Chinese.

2. Add new course: *Accelerated French I*

The goal of this course is to prepare students for the high school French program. Students will hone their skills in reading, writing, speaking, and listening. This course emphasizes the key grammar concepts and vocabulary necessary to advance to French II.

Shrewsbury High School Mission Statement

The Shrewsbury High School community provides challenging, diverse learning opportunities; promotes creativity and independent thinking; and empowers students to become capable, caring, active contributors to the world in which they live.

Health

1. Add new course: *Global Health*

The course description is as follows: Students interested in fields of medicine, environmental science, and influencing public policy would benefit greatly from this course. *Global Health* is a multidisciplinary field that involves a blend of health and social sciences, such as biology, medicine, epidemiology, environmental science, anthropology, economics, and sociology. Students will have the opportunity to examine infectious diseases, lifestyle diseases, and mental illness while considering how society and culture influence our health. They will investigate barriers to solving global health issues, as well as explore solutions for improved global health. Potential topics include CVD, diabetes, and the obesity epidemic; HIV/AIDS, malaria, influenza, and tuberculosis; stress, depression, and anxiety; food supply, safety, and nutrition; environmental and societal factors, such as climate change, big industry, economic disparities, and water availability. Students will analyze the relative importance of issues and practicality of solutions with discussion, debate, and position papers. Students who want to take this course for honors credit must execute a written agreement with the teacher for additional work. This course meets for 3 days of the 7 day rotation.

Instructional Technology and Media Services (ITAMS)

1. Add new course: *Cybersecurity* Full Year, Elective, Grades 10-12, A Level

The course description is as follows: Using the nationally recognized *Project Lead the Way* (PLTW) curriculum, this course will expose students to the ever-growing and far-reaching field of cybersecurity. Students will engage in problem-based learning, where students act as cybersecurity experts and train as cybersecurity experts do. Students will identify cybersecurity threats and how to protect against them; learn how to detect intrusions and respond to attacks; begin to examine their own digital footprint and how to better defend their own personal data. They will learn how organizations protect themselves in today's world and what careers exist in the emerging field of cybersecurity. Whether students are seeking careers in the emerging field of cybersecurity or learning to defend their own personal data or a company's data, students in PLTW Cybersecurity establish an ethical code of conduct while learning to defend data in today's complex cyberworld. No previous experience required.

NOTE: We are working toward creating a Computer Science (CS) Pathway for students through *Project Lead the Way* and the College Board. In order for students to earn CS Pathway recognition, they must satisfactorily complete three courses in the pathway – one AP course; one PLTW course; and a third course, either AP or PLTW – and earn a qualifying score of 3 or higher on the AP Exam(s) and a score of Proficient or higher on the PLTW End of Course assessment(s).

Students who complete the requirements of their chosen pathway earn the AP + PLTW student recognition, a qualification that demonstrates to colleges and employers that the student is ready for advanced course work and interested in careers in this discipline.

The College Board and *Project Lead The Way* are in the process of developing a portfolio of career-focused opportunities that will allow students to pursue work-based learning with leading industry partners. Opportunities may include industry-based internships, scholarships for a two or four-year degree completion, or priority interviews for students with the recognition.

2. Add language to course description: *Intro to Computer Programming with JAVA*: This course will not be offered during the 2019-20 school year.
3. Add language to course description: *Student Innovation Team*: SIT students provide tech support as they work at our help desk, located in the media center. This course can be taken as a semester course or a full-year course.

Mathematics

1. Add new course: *Foundations of Algebra & Geometry*.
The course description is as follows: This course will investigate and build upon the basic foundations of Algebra and Geometry in an approach that will enable students to make the connections necessary to apply their skills in a variety of application-based problems. The units of study will include patterns in data, patterns of change, linear functions, patterns in shape, and exponential functions. Important ideas are continually revisited for students to make connections and develop a lasting understanding of the mathematics they are studying. Students who are successful in this course will be expected to enroll in Algebra & Geometry I as their next course. This course will use ALEKS software to support students' work with the course curriculum as well as their work on cumulative math review topics. ALEKS will create a learning path for students based on their performance and work in ALEKS will help to remediate or expand their knowledge of the course content. A graphing calculator (TI-83 or TI-84) is recommended because it is used extensively.
2. Add new course: *Algebra & Geometry II/Advanced Math I Honors*.
The course description is as follows: This accelerated mathematics course will further the study of topics in Functions, Equations and Systems, Coordinate Methods, Regression and Correlation, Nonlinear Functions and Equations, Probability, and Trigonometry. The units of study will also include Reasoning and Proof, Inequalities and Linear Programming, Similarity and Congruence, Polynomial and Rational Functions, Circles and Circular Functions, Modeling Sequential Change, and Inverse Functions. All of these topics will prepare students for the study of Precalculus and Calculus. Students in this accelerated Honors level course are expected to develop independent thinking skills as they approach new situations and investigate topics in depth. Students must

demonstrate mastery in all of the course content in order to be recommended for *Precalculus Honors* for the next year. This course will use ALEKS software to support students' work with the course curriculum as well as their work on cumulative math review topics. ALEKS will create a learning path for students based on their performance and work in ALEKS will help to remediate or expand their knowledge of the course content. A graphing calculator (TI-83 or TI-84) is recommended because it is used extensively.

(NOTE: A Research Methods Option will also be available for this course, for those students who are also enrolled in *Research Methods & Biology Honors*.)

Performing Arts

Change introduction to Performing Arts section to:

“The vision of the Shrewsbury High School Performing Arts Department is to instill in our students and community a life-long passion for the performing arts that promotes personal and professional artistic interests beyond high school graduation.

The mission of the Shrewsbury High School Performing Arts Department is to provide a creative curriculum with engaging, collaborative and inclusive opportunities that will inspire critical artistic thought and a personal passion for every student enrolled in a performing arts course.”

1. Add new course: *Foundations of Dance* (Semester course)

Movement training helps to develop general body awareness, release unnecessary tension, and create strength and mobility. In this course students will explore movement improvisation that empowers the participant to be receptive to the immediate moment, to listen with the whole body, to make a spontaneous offer with confidence, to reconnect to imagination and to identify emotional states. Foundations of Dance is open to students in grades 9-12.

2. Add new course: *Stage Combat* (Semester course)

This course is an introduction and exploration of technical and aesthetic aspects of stage combat. Our main goals are to develop the ability to safely portray violence onstage within the context of a play with specificity and dramatic power, as well as to understand how stage combat fits into the practice of theater as a whole. Other aspects include the development of strength and flexibility, eye/hand coordination, understanding and applications of principles of safety in working with a partner, and learning how to advance your character journey and develop ensemble work through each individual move in a fight sequence. This course is open to students in grades 10-12.

3. Add new course: *Musical Theater Dance* (Semester course)

This course explores *Musical Theatre Dance* and techniques to include vocabulary, technique, and history. Pieces of original choreography from a variety of Broadway shows will be set in class. This course is open to students in grades 9-12.

4. Add new course: *Jazz I Dance* (Semester course)

This will be a beginning level Jazz dance class designed for the student with little or no previous training. It can also serve as a refresher for those who have previous experience and will seek to create new challenges within the scope of the technique to further their abilities. Emphasis will be on learning and/or re-emphasizing basic jazz technique through specialized placement and alignment of the body, and performing stylized steps and moves. This course is open to students in grades 9-12.

5. Add new course: *Guitar Ensemble* (Semester course)

Guitar Ensemble is a continuation of the *Introduction to Guitar* course. The emphasis of this course will be on performance in various settings including large ensembles, quartets, and trios while utilizing an expanded range of notes and rhythms. Students will also develop an understanding of basic concepts of music theory through composing and arranging projects.

Prerequisite: Successful completion of *Introduction to Guitar* or with permission of the instructor through demonstrated proficiency in reading standard music notation.

6. Add new course: *iPad Ensemble* (Semester course)

This course offers the student the opportunity to use the iPad as an instrument to learn to perform and read music, in both traditional and graphic notation. Throughout the course, ensemble members explore new applications, new works and ways of notating music. Works performed in class range from transcriptions of traditional works, structured improvisation, aleatoric scores, and works written by students. This course is open to students in grades 9-12.

7. Add new course: *Honors Chamber Orchestra*

Honors Chamber Orchestra is designed to develop a student's highest musical potential through performing advanced quality literature in orchestra repertoire. Students are selected for participation by audition held in the previous spring to ensure a well-balanced ensemble. Advanced concepts in ear training, theory, music literacy, musical terminology, and music history will be explored. The organization performs at school concerts throughout the year and often prepares for other venues, including competitions and festivals. Students are encouraged to audition for Central District and All-State Music Festivals. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation. Prerequisite: Selection by audition.

8. Change course description: *Orchestra*

Orchestra is a performance course available for violinists, violists, cellists, and bassists. This class explores concepts in musicianship, ear training, theory, music literacy, musical terminology, and music history as well as teaching leadership qualities. String-specific skills such as bow management, shifting, vibrato, and tone production will be explored. Students in Orchestra will rehearse and perform quality orchestra literature. The organization performs for school concerts throughout the year and often prepares for other venues, including competitions and festivals. Students are encouraged to audition for Central District and All-State Music Festivals. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation. Prerequisite: Experience with Middle School Orchestra or equivalent. Previous class or private instruction.

9. Add new course: *History of American Music: Rock and Roll* (Semester course)

This course is designed to explore one of our country's most powerful art forms. From its roots in blues, country, gospel, and R&B, Rock and Roll and its successor forms have touched all facets of our lives, private and public for over five decades. Rock and Roll is experienced not simply as a culture or sound, but also in cinematic and television culture, as well as literature, fashion, politics, dance, and more. Semester elective, this course is open to students in grades 9-12.

10. Add language to course description: *Playwriting/Directing* will not be offered in 2019-2020. It will be offered in 2020-2021 in place of *Movement for Theater*.

Science & Engineering

1. Add new course: *Honors Environmental Science*

This course will run concurrently with A level *Environmental Science*. The course description falls under the existing A level *Environmental Science* course. Students choosing to enroll in the Honors option will be expected to do extensive and sustained independent research and analysis outside of class and will be expected to present their findings in written, visual, and oral formats.

2. Add new course: *Principles of Biomedical Science*

Prerequisite: *Biology* or co-enrollment in *Biology*

In this *Project Lead The Way* course students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems. This course will be available to 9-12 grade students at the A level.

NOTE: This course can only run if adequate funding is made available. We are currently

applying for a Grant to help cover most of the start-up costs. The \$50,000 grant over 3 years requires us to introduce and run 3 courses in the PLTW Biomedical pathway within a 3 year period. The additional 2 courses will include Human Body Systems and Medical Interventions. Without grant funding, the estimated start-up cost for each course is \$20,000 (This includes 2 week PLTW teacher training) Additionally this will require a sustained \$3000 increase in the annual departmental budget to cover costs for consumable materials in addition to the PLTW Biomedical Participation fee. In 2012 we attempted to introduce PLTW Bioengineering in a similar fashion. Our grant proposal was unsuccessful and district funding was not sufficient to start up the course inhouse.

Visual Arts

All course descriptions were changed to reflect and/or emphasize the content of the course that suits students' interests and/or skill.

1. *Art Appreciation* - Do you wonder how Michelangelo painted the Sistine Chapel or why Van Gogh cut off his ear? *Art Appreciation* covers the basics of art history and the how and why art is an important tool for understanding history. We cover art making mediums, discuss art from prehistoric times to the present, and all of the various art movements that have shaped art into what we see in museums and galleries. The point of this class is to get students familiar with terms and concepts so that they can confidently develop their own thoughts on the art they are seeing.
2. *Art Intro* - Maybe you are intimidated by drawing and/or painting or maybe you are looking to improve your drawing/painting skills. Either way, *Art Intro* is for you! In this course you will cover the basics with step by step instruction, understand the importance of observing and studying, drafting and revising, while exploring a variety of art materials. End result, students will understand how to create the illusion of three-dimensional imagery through shading, color and perspective. *This course is the prerequisite for *Studio I*.
3. *Ceramics I* - Come explore the world of clay in *Ceramics I*! This is an introductory class which goes over the basics of working with clay and glaze, handbuilding techniques and how to use the potters wheel. Some of the projects we create include tiles, slab boxes, teapots and functional objects such as bowls and cups. Whether you are new to clay or have been to Claytime, *Ceramics I* will get you feeling confident about making and glazing clay objects.
4. *Ceramics II & Sculpture* - *Ceramics II* builds on the knowledge gained in *Ceramics I*, improves your clay skills and pushes the boundaries with your ideas. Some of the projects include both wheel thrown and handbuilt components, creating sculptures from clay forms made on the wheel and working on expanding your glazing and design skills. Prerequisites: *Ceramics I & Sculpture*

5. *Ceramics III & Sculpture* - Did *Ceramics I* and *II* inspire you to want more clay? In *Ceramics III* we explore creating large handbuilt ceramic sculpture and expand our wheel working skills. Students work independently researching and developing projects, drafting ideas and creating mock-up designs. Attention to detail and pushing your limits will be required. Prerequisites: *Ceramics II & Sculpture*
6. *Creative Sketchbooks* - Do you like to doodle, journal, and draw? Do you want to explore new materials? Then this is the class for you! This class is a mix of abstract and realistic projects done in a sketchbook, using all kinds of materials, such as drawing, painting, and collaging. Projects will be quicker and more experimental, however, students will still learn the foundational drawing techniques and understand the importance of observation. While most projects stay within the sketchbook, some projects may expand beyond.
*This course is the prerequisite for *Studio I*
7. *Digital Art & Design* - Do you love technology? Would you like to learn how to use Adobe Photoshop and get your art requirement at the same time? No need for any prior drawing experience. This is an art course that uses technology as a medium. Students learn the basics of Adobe Photoshop while learning artistic concepts. Students in *Digital Art & Design* learn about famous artists, art techniques, as well as basic layout and design. Some of the lessons are modeled after artists like Andy Warhol, Picasso, and Ben Heine. Adobe Photoshop does more than manipulate photos, it is also a program with drawing, painting and typographic capabilities.
8. *Advanced Digital Art & Design* - Are you a Photoshop whiz? Do you want an art course with more technology and less drawing? In this course students build on what they learned in *Digital Art & Design*. With some review of Adobe Photoshop, students are then introduced to Adobe Illustrator, which is a more intense drawing and graphics program that allows for accurate perspective drawing, as well as creating vector graphics. Additionally, students will expand their understanding of layout, design, and typography as a creative process in communication. Prerequisites: *Digital Art & Design*
9. *Mixed Media* - Do you feel intimidated when it comes to a traditional art class? Do you want to try working more experimentally? Take risks, try new techniques and embrace the happy accidents! In *Mixed Media* you will use traditional drawing, painting and printmaking materials in combination with collage and assemblage methods, allowing you to experiment and explore the process of creating a finished piece.
10. *Studio I* - Are you looking to delve a little deeper with materials and techniques? Are you looking to start building a portfolio? *Studio I* is the course for that! During the semester, students will continue to build on concepts and skills, while being challenged to think more independently and creatively. Prerequisite: *Art Intro or Creative Sketchbooks Semester II Course*

11. *Studio II Honors* - Looking to build a portfolio? *Studio II* is where you want to be. This class explores a variety of media and subject matter in drawing and painting that will be looked for when applying to college. Artists will create works that are both guided and open-ended, showing one's individual style, creativity and self-expression, with a strong understanding of materials, concepts and techniques. Students may use pieces created as Breadth work for Advanced Placement Studio Art. Prerequisite: *Studio I*
12. *Advanced Placement Studio Art: Drawing* - This class is for the serious art student who wants to come up with a theme/concentration for the entire year and generate their own assignments based on that. Their artistic journey over the year should show growth and development within their chosen theme. In combination with 12 Breadth pieces of art, the student's 12 new pieces from their concentration/theme will be submitted along with an essay for the AP Studio Drawing test. Students must be able to work independently at a demanding pace to meet the deadlines for the exam. Prerequisite: *Studio II*
13. Add new course: *Sculpture & Installation* - Do you like working with your hands and using tools? Do you like art that doesn't just hang on the wall? *Sculpture and Installation* will explore a variety of mediums including plaster, wire, wood, cardboard, and found objects. We explore relief sculpture and free standing work, plan out installation learn how to display our works. Students will work independently and collaboratively with peers in producing work. This course is open to students in grades 9-12.
14. Add new course: *Traditional & Digital Photography* - Do you love to take photos and want learn more about photography? This class covers the ins and outs of using both digital and 35mm film cameras. Students will be using a darkroom to print traditional black and white prints as well as learning Adobe Photoshop to manipulate and enhance photos. This course is co-taught with two art teachers. Each student will be spending an equal amount of time in the darkroom and the computer lab. Students shoot a variety of subjects including portraits, landscapes, still life, candid, close-ups and experiment with their film negatives and computer files to create captivating images. We learn about composition, using a tripod and the history of photography. This course is open to students in grades 10-12.
15. Eliminate *Photography*. This course has been retooled and named Traditional & Digital Photography in order for students to learn about both analogue and digital photography in one semester. This will allow for flexibility in scheduling.