

GRADE 8 ELECTIVES

Art 2D-Semester - The purpose of this course is to enable students to develop fundamental art appreciation skills through production of two-dimensional works of art. Production activities may include drawing, painting, and printmaking.
Art 3D-Semester - The purpose of this course is to enable students to develop fundamental art appreciation skills through the production of three-dimensional works of art. Production activities may include sketching, sculpting, and assemblage. Application required.
Artificial Intelligence and Mobile Robotics-Semester - Students will be introduced to the concepts of this rapidly growing field in technology. Students will explain how insect and mammal behaviors help Artificial Intelligence researchers and designers create intelligent systems. Students will learn about robots and control systems, demonstrate the functions of sensors and outputs and create intelligent systems using the problem solving process.
Design and Modeling-Semester - Students apply the design process to solve problems and understand the influence of creativity and innovation in their lives. They work in teams to design a playground and furniture, capturing research and ideas in their engineering notebooks. Using Autodesk® design software, students create a virtual image of their designs and produce a portfolio to showcase their innovative solutions.
Energy and the Environment-Semester - Students are challenged to think big and toward the future as they explore sustainable solutions to our energy needs and investigate the impact of energy on our lives and the world. They design and model alternative energy sources and evaluate options for reducing energy consumption.
Green Architecture-Semester - In this class, students learn how to apply this concept to the fields of architecture and construction by exploring dimensioning, measuring, and architectural sustainability as they design affordable housing units using Autodesk's® 3D architectural design software.
Introduction to Computer Science 1-Semester - Students discover the principles of this fast-growing field by focusing on creativity and an iterative design process as they create their own basic apps using MIT App Inventor.
Magic of Electrons-Semester - Through hands-on projects, students explore electricity, the behavior and parts of atoms, and sensing devices. They learn knowledge and skills in basic circuitry design, and examine the impact of electricity on the world around them.
Medical Detectives-Semester - Students play the role of real-life medical detectives as they analyze genetic testing results to diagnose disease and study DNA evidence found at a "crime scene." They solve medical mysteries through hands-on projects and labs, investigate how to measure and interpret vital signs, and learn how the systems of the human body work together to maintain health.
MOS (Microsoft Office Specialist)-Year - Students prepare to take the certification tests in Microsoft Office applications such as Word, Outlook, Excel, Access, and Powerpoint. Students will earn 1 high school credit .
Music Technology -Semester - Students investigate the fundamental applications, tools, history and aesthetics of music technology. Student musicians explore traditional, current and emerging technologies, including personal devices; and use them to explore, capture, create, arrange, manipulate, reproduce and distribute music. Performances are an integral part of the curriculum.
Science of Technology-Semester - How has science affected technology throughout history? To answer this question students apply the concepts in physics, chemistry and nanotechnology in hands-on STEM activities and projects. Students will engage in activities such as oil spills, roller coasters and how nanotechnology has changed society.
Technical Art-Semester - Students learn the skill of orthographic drawing and other art skills related to engineering.
Theatre 1-Semester - Students learn the basic of building a character through such activities as pantomime, improvisation, and effective speaking using articulation, projection and breathing. Students also learn the importance of technical theatre and explore the use of such elements as costumes, props and scenery.
TV Production-Semester - The purpose of this course is to introduce students to careers in the Arts, A/V Technology and Communications. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology for creating morning announcements and other school communications. Application required.
Video Game Design I-Semester - This course is designed to give students an overview of beginning concepts of computer programming in "Basic" computer language. Students are placed in a simulated job environment and given the task of learning how to manipulate code in a video game and then creating their own game.
Video Game Design II-Semester (Prerequisite Video Game Design I - This course builds on the techniques learned in VGD I. The student will learn to use an enhanced set of programming tools that include Dark Basic Professional as well as scenery, modeling, and game physics applications. The students will also personally design and build their own games using these tools. The tools used are professional grade and can give the students a true window into the world of video game design.
Web Design I and II-Semester - This course will cover the fundamental elements of web design. Students will build web pages with HTML and CSS coding using a text editor. In addition, the essential principles of web design, including white space, proximity, alignment and contrast will be studied and employed when creating student websites. Students will develop professional quality portfolios of original digital graphic artwork using paint and photo editing software. They will develop a critical eye by routinely analyzing various websites' content and design. Web Design II is offered by application only, prerequisite Web Design I.
Chorus I-Year - Students with little or no experience will begin to develop vocal technique and skills, critical and creative thinking skills, and an appreciation of music from around the world and through time. Performances are an integral part of the curriculum.
FIRST LEGO League-Year - Lego League is a hands-on program that uses challenges based on real world scientific problems to engage students in research, problem solving, and engineering. The teams will design, build and program LEGO Mindstorms robots to complete very challenging missions on an obstacle course. Students are REQUIRED to attend at least two competitions which are on Saturdays between November and February. This is a very challenging, but rewarding, elective for self-motivated students. Application required
Journalism 1 (Yearbook) -Year; Application Required - The purpose of this course is to enable students to develop fundamental skills in the production of journalism across print, multimedia, web, and broadcast/radio platforms and to become aware of journalism history, careers, ethics use, and management techniques related to the production of journalistic media. Some activities may be required outside of the school day. Application required.
SECME-Year; Application Required - This class provides the students with hands-on stem learning opportunities. The students will learn the principles behind the activities and then use their stem knowledge to design and build items that will be taken to stem competitions throughout the year. The students are also introduced to engineering related careers through guest speakers and field trips. SECME's goal is to encourage and inspire students to pursue stem related areas for further study and as a future career. Application required.
Band I - Year - Students have the opportunity to try different instruments in this year long course. The director will guide students in the selection of an appropriate instrument. Reading music, rhythm, musical terms and symbols, and proper performance techniques are taught in this course.
Band II (Concert Band)-Year - Concert Band is open to students at an intermediate level of development. Students should be proficient in music reading, scales, tone production, and articulation. Greater emphasis is placed upon performing band music at an intermediate level. Students will have after school rehearsals when necessary for concert preparation. Performances are an integral part of the curriculum.
Band III (Symphonic Band)-Year - This accelerated advanced-level instrumental class is for students who have successfully completed at least one year of Beginning Band and/or Concert Band. Students will be given challenging opportunities to develop a higher level of musicianship and performance skills through the study of different levels of styles of band literature. Students will participate in concerts, Music Performance Assessment, and performance activities. Placement in this class is by Director
Jazz Band-Year - A placement audition is required for Jazz Band. The course explores the rhythmic and improvisational skills used to perform jazz as well as the stylistic and historical understanding. Students will study the three basic types of jazz: rock, swing and Latin. The instrumentation for this jazz ensemble may consist of but not limited to trumpets, saxophones, trombones, bass guitar, guitar, drum set and keyboard. Performances are an integral part of the curriculum.