



# TECHNOLOGY

## **Art 1: Digital Art**

This year-long course allows the student to explore art, design, and communication through the Adobe Creative Suite (Photoshop, InDesign, and Illustrator), as well as Microsoft Publisher. The students will study the elements and the principles of traditional art, as well as the graphic design principles. The students will gain skills in the four programs as they create a variety of communication pieces including posters, letterheads, business cards, newspaper ads, brochures, advertisements, cd covers, and website. They will also gain an understanding of branding and marketing as they create and package a business. As an introductory Art 1 course, there will also be instruction in the skills of drawing, color, composition, and photography. Building upon the acquired skills and knowledge, the students will begin to create original works of digital art using their own photography.

(1 Credit)

Exceptional work in 7th & 8th grade art (or an equivalent) and a teacher recommendation may exempt students from Digital Art 1 and allow them to enroll in an Art 2 course in ninth grade should seats be available. Though a student can exempt Art 1 per the guidelines above, there will be no academic credit awarded on the transcript for the exemption.

## **Art 2: Advanced Digital Art**

This semester course allows a greater in-depth exploration of design through the Adobe Creative Suite (Photoshop, InDesign, and Illustrator), as well as opportunities with SketchUp creating 3/dimensional architecture and products, and Corel Painter using a graphic tablet. The primary goal of this course is to focus on the art form of digital art itself, encouraging unique creative projects that could serve as preparation for AP Art the following year. Students will use their acquired skills in the programs to create original works using their own photographs.

Prerequisite: Graphic Design, Digital Art 1, or Photography

(.5 Credit)

## **Art 2: Graphic Design**

This semester course allows the student to operate as a member of a graphic design studio while exploring design and communication through the Adobe Creative Suite (Photoshop, InDesign, and Illustrator), as well as Microsoft Publisher. The students will have the opportunity to design promotional pieces for Whitefield events with real clients and real-time deadlines. The students will study graphic design, branding, and marketing principles and their importance in today's visual culture while gaining skills in the four programs. They will create a variety of communication pieces including posters, letterheads, business cards, brochures, advertisements, and a complete website. An overview of vector graphics while working in Illustrator on an "art for art's sake" project and/or screenprinting a t-shirt design using an exposure unit will be the final course segment.

(.5 Credit)

Prerequisite: Art I, Digital Art I, or Yearbook I

## **Art 2: Advanced Graphic Design**

This semester course allows a greater in-depth exploration of design and communication through the Adobe Creative Suite (Photoshop, InDesign, and Illustrator, Premier Pro, After Effects). as well as instruction and experimentation with SketchUp creating 3/dimensional architecture and products, Corel Painter using a graphic tablet, creating videos in iMovie on a iPad or Premier Pro, screenprinting using an exposure unit, TinkerCad and printing on a 3/D printer, and creating video graphics in After Effects. The primary goal of this course is to expose the students to a broader range of computer and technology applications used in Graphic Design today, and teach them entry-level skills on these applications.

(.5 Credit)

Prerequisite: Graphic Design or Digital Art I

## **Live Production**

This semester course is an introduction to technical theater and live production and engenders an appreciation and understanding of the production process. Students will explore the basics of

production planning, rigging, lighting, scenic, and sound design. In class, students will focus on disciplined time management, communication, and group problem solving while assisting during assemblies, concerts, and events in the Louise Owens Theater. The goal of this course is to develop a method of understanding technical aspects of production and discovering a language with which to express this understanding in a theatrical context. Students are expected to attend rehearsals and crew calls for assigned projects to include events outside school hours. Dedication and critical thinking are a must for this course. Offered fall and spring.

(.5 credit per semester)

Prerequisite: completion of Theater Tech and teacher recommendation

## **Innovation in Science**

This semester-long elective course focuses on developing creative thinking and puts a premium on collaboration to complete projects. The student is responsible for finding opportunities to demonstrate his or her learning by looking for opportunities to innovate. This project-based learning course focuses on student-driven research, using the resources of the Innovation Lab to develop solutions to real world problems. Bi-weekly reflections of project progress will be required and communicated via a blog, podcast, or vlog. At the conclusion of each project, the student will give a “TED Style” presentation.

Students will learn techniques for improving the flexibility and originality of their thinking and will explore approaches to create and sustain high levels of innovation. Topics include; personal thinking preferences, everyday creativity and eliminating mental blocks, creative thinking techniques, idea selection approaches, teaming techniques for creativity, conditions that promote creativity, design for interaction, disruptive technologies, and intellectual property. The course uses fun and hands-on activities to stimulate innovation.

(.5 credit per semester)

## **AP Computer Science Principles**

The purpose of this Advanced Placement course is to complete an introductory study of fundamental computing concepts. Five major ideas are investigated: creative development, data, algorithms and programming, computing systems and networks, and impact of computing. Within this overarching framework, computational thinking skills are developed. Students build conceptual understanding and gain practical programming experience using both a block-based and a text-based language. Before taking the written portion of the AP exam in May, students

must complete and submit a final performance task. The responsible use of computers is stressed throughout the course.

(1 credit)

Prerequisite: Geometry

## **AP Computer Science A**

The purpose of this Advanced Placement course is to complete an introductory study of computer science in preparation for the AP exam to be held in May. By taking an object-oriented approach to programming using the Java language, the course places particular emphasis upon the appropriate design and development of computer programs to solve problems. Fundamental computer science concepts such as the implementation of algorithms and the use of data structures are investigated. Basic hardware and software principles as well as the responsible use of computers are important components of this college-level course. Students are required to take the AP Computer Science A exam at the conclusion of this course.

(1 credit)

Prerequisite: Honors Geometry and/or teacher recommendation