

Video Game Programming & Design Pathway



BUSINESS & INDUSTRY ENDORSEMENT



- AND/OR -

Digital Design
Media Production

- AND/OR -

Gateway to Coding

COMPUTER PROGRAMMING

KISD #: 914818 PEIMS: 1303758
Grades: 8-9 1 Credit
Prerequisite: None

Computer programming is a part of every industry. Students will acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming.

Required Fee/Materials: Yes

DIGITAL DESIGN AND MEDIA PRODUCTION

KISD #: 4922J PEIMS: 03580400
Grades: 8 1.0 Credit

Recommended Prerequisite: Strong reading and comprehension skills and ability to work independently

The Digital Design and Media Production (DDMP) class meets in a computer lab where students will obtain hands-on experience working with a variety of media tools (graphic/image, audio and video) to design multimedia projects. Students will utilize various software applications including Adobe products such as Photoshop and Illustrator. This project based course focuses on real-world audiences as customers.

Required Fee/Materials: Yes
Note: High School graduation credit course.

GATEWAY TO CODING

KISD #: 9489J18 PEIMS: N1303758
Grades: 7-8 0.5 Credit
Prerequisite: None

Students will design and develop a physical computing device, interactive art installation, and plan and develop code for microcontrollers that bring their physical designs to life. Students will also computationally analyze and develop solutions to authentic problems through mobile app development. Students will customize their experience by choosing a problem that interests them from the areas of health, environment, emergency preparedness, education, community service, and school culture.

Required Fee/Materials: Yes

VIDEO GAME DESIGN

KISD #: 915118 PEIMS: 13009970
Grades: 9-10 1.0 Credit
Prerequisite: None

Students will explore one of the largest industries in the global marketplace and the new emerging careers it provides in the field of technology. Students will learn gaming, computerized gaming, evolution of gaming, artistic aspects of perspective, design, animation, technical concepts of collision theory, and programming logic. Students will participate in a simulation of a real video game design team while developing technical proficiency in constructing an original game design.

VIDEO GAME PROGRAMMING

KISD #: PEIMS: N1300994
Grades: 10-11 **1.0 Credit**
Prerequisite: Video Game Design

Video Game Programming expands on the foundation created in Video Game Design through programming languages such as: C# programming, XNA game studio, Java, and Android App. In this course, students will investigate the inner workings of a fully functional role-playing game (RPG) by customizing playable characters, items, maps, and chests and eventually applying customizations by altering and enhancing the core game code.

ADVANCED VIDEO GAME PROGRAMMING

KISD #: PEIMS: N1300994
Grades: 10-11 **1.0 Credit**
Prerequisite: Video Game Design

Advanced Video Game Programming students will be introduced to mobile application design and programming using Java and Eclipse for Android devices. Time will be spent learning basic Java programming and working with Android Studio to develop real working apps. Using Unity as an introduction to 3D game development, students will have exposure to and an understanding of: object-oriented programming concepts; game development skill with programs such as Unity; 3D modeling with programs such as Blender; image manipulation with programs such as GIMP; concepts related to the design process; and the ability to communicate and collaborate on group-based projects.

PRACTICUM IN GRAPHIC DESIGN AND ILLUSTRATION

KISD #: PEIMS: 13009000
Grades: 12 **2.0 Credit**
Prerequisite: Video Game Design

In addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop a technical understanding of the industry with a focus on skill proficiency.