

Video Game Development Career Pathways

Granger High School is excited to announce our new four year CTE program to prepare our students to work as video game developers.

FRESHMAN YEAR: The first year, freshmen will have the opportunity to take a one semester class in Game Development Fundamentals. This class will teach students the history of video games, the elements involved in game design, and give them practical experience to help them decide whether they want to pursue the programmer or artist pathway. They will model their own game character. They will then add a skeleton of bones to rig it for animation. Then they will record their own motions to use in their game using motion capture. Before the semester is over they will tie it all together with code to create a simple game in Unity3D that they can play on their own devices.

SOPHOMORE YEAR: Sophomores will have to choose whether they want to learn to program or to create 3D art. Programmers will learn to code in C# by writing increasingly complex games in Unity 3D using art and designs provided for them. The artists will take 3D Modeling first semester and 3D Animation second semester. They will learn to build characters, texture them and animate using motion capture and key frame techniques. The art they build will be made to fit various game design requirements so it can be easily integrated into existing Unity 3D projects.

JUNIOR YEAR: Juniors will continue separately along the two paths, but in their Video Game Development I classes they will begin to work collaboratively with each other to experiment with their own simple designs. The focus this year will be on creating project goals and then accomplishing them on time while building more advanced skills.

SUMMER INTERNSHIP: During the summer between their junior and senior years, the 20 programmers and 20 artist who have earned a spot in the Video Game Development II class will have the opportunity to spend a few weeks as an intern with some of the local game developers here in Salt Lake. This hands on learning experience will not only help them polish their skills, it will help them build positive relationships with the very companies who will be competing to hire them when they graduate.

SENIOR YEAR: The final year of the program will offer the top 20 students from each pathway a chance to collaborate together as they design, build, market and release an actual commercial product. The class will be split into two teams and those teams will compete for scholarships as they create their first commercial video game. Any profits made from the games will be used to provide scholarships to students who completed the program throughout their college years.

THE FULL PROGRAM: The full program will be offered starting next year, but we are going to offer two sections of the first year class during the second semester of the 2015-2016 school year. These classes are open to all students, but preference will be given to freshmen and sophomores who are committed to pursuing the program long term. All of the courses in this program are fast-paced and challenging. You will need to be self-motivated, and able to work well both independently and in collaborative groups.

REGISTRATION: In order to enroll, you need to meet with the instructor, Mr. McCarl, in room D-116. He will answer your questions and give you a packet of information for you to review with your parents or guardians. You will need to bring back the signed permission slip to Mr. McCarl and then he will inform the counselors so that they can call you down and help you rearrange your schedule.

ESPECIALLY FOR PARENTS

New Granger Program: Video Game Development Career Pathways

We are happy that you are taking the time to consider this new Video Game Development Career Pathway with your student. The goal of this program is to give your student the skills and tools necessary to participate in the video game industry either on their own or as an employee of one of the dozens of game developers located in Utah. The video game industry is responsible for nearly three thousand jobs in Utah and adds more than \$110 million to the Utah Economy. The rise of the iOS and Android app stores have made it easier than ever for an independent team of talented people to produce, market, and make a good income from sales of their own video game creations.

CAREER PATHWAYS COMMITMENT: However, like the game industry itself, this program will be extremely challenging and require your student to really excel just to keep up. Both the programmer and artist pathways require a certain level of competency in math, reading, and writing. Much of the instruction is introduced to the group through demonstration and then the student will complete self-directed learning activities by following written instructions and video tutorials. Design documents are an essential part of creating games and your student will need to learn to both read and write design documents. Ultimately, the most important questions to ask as you decide whether this program is appropriate for your student are: Is my student committed to pursue this program through graduation, and is my student capable of the self-motivation and self-control necessary to complete it?

PREREQUISITES: There is no prerequisite to enroll in the introductory class. It is meant to open a world of possibilities that students may never have considered before. However, students who cause problems and disrupt the learning environment for others will not be allowed to remain. Similarly, there are more interested students than we have room for in the classes, so if your student isn't progressing, they will be transferred to a different subject to make room for those on the waiting list.

CONDITIONS TO STAY IN THE PROGRAM: There is one other thing to be aware of concerning progress. To continue on in the program, in future years, your student will be expected to maintain a minimum of a 2.0 GPA and have no more than one F in any term. This is the same as the requirements to participate in any of the schools teams. Additionally, students will need to maintain a C or higher in their math and English classes. This is not meant to exclude anyone, because we believe anyone who tries can reach that goal; rather, it is meant to encourage your student to put forth their best effort in all of their school work, so that they will complete high school with both the programming or art skills to make games and the work ethic that will make them desirable to employers.

Be aware that this career pathway requires a minimum of 3.5 credits over the course of four years. Students who are heavily involved in music, drama, sports, AP subjects, or release time seminary need to carefully consider how this will affect their path to graduation.

SIGN UP FOR THE CAREER PATHWAY: If you feel that your student is up to this challenge and will be benefitted by participating, please fill out the permission slip and have them return it to me in room D-116. Space is limited, and will fill up quickly. Preference will be given to freshmen and sophomores who can benefit from a longer time in the program. A waiting list will be maintained once the classes fill.

ABOUT THE INSTRUCTOR: In closing, let me introduce myself. I began programming at age ten and wrote my first commercial product when I was only 11 years old. I have created games for handhelds, consoles, Windows PC's, and mobile phones and tablets. I am also a successful 3D artist brokered through DAZ3D.com. I owned a successful video game company in Salt Lake for over a decade and employed nearly thirty people at our busiest times. About a decade ago I decided to leave the game industry and do something to better the world. I choose to try to make a difference in kids' lives as a high school science teacher. I am thrilled to be able to merge my two loves: teaching kids and creating games. With over twenty-five years of video game industry experience, I can teach your student the skills they need to succeed. All they need to bring, is the "will to do" it.

Paul McCarl, Video Game Development Instructor
Granger High School
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Permission Slip to Enroll in Game Development Fundamentals

This class will be offered during second semester of the 2015-16 school year at Granger High School.

I have read the accompanying materials and discussed them with my student. My student and I believe that this will be a positive experience and my student is committed to pursuing the Game Development Career Pathway through graduation. I understand that there is an expectation for acceptable performance and positive behavior. I also understand that misbehavior or failure to complete assignments will lead to my student being removed from this program within the first two weeks of the quarter so that someone else may participate.

Parent or Guardian Signature Date

Student Signature Date

Student Name (Please Print) Student Number

Current Grade Level (9th, 10th, 11th, or 12th) Current Interest (Artist or Programmer)

For the student to answer: Why do you want to be a game developer?
