



VIDEO GAME DESIGN SYLLABUS

Video Game Design (VGD)

COURSE INFORMATION 2022-2023

- Course Description: Students learn to design and create video games using trigonometry and higher math, computer programming in C#, as well as 2D computer animation. This course prepares students with skills necessary for two of the video game industry's biggest needs: qualified video game designers and programmers. Strong programming skills are not needed. Such skills will be developed and refined as you progress throughout the program. This is a math intensive program. Please review the OSPI Frameworks for this course on the class website for a complete list of topics and competencies covered in this course.
- 3.0 CTE (Occupational) or Elective Credits
 - 1.0 English Equivalency
 - 1.0 Algebra II OR Geometry Equivalency
 - * Elective Credit availability varies by School/District, verify with your Counselor
- Dual Credit: It is possible to earn up to 5-10 college credits through Bellevue College for this course. All programming assignments must be completed at an 80% or higher.
- Session Times: 7:55-10:25 (AM) or 11:10-1:40 (PM) M-F
- Prerequisites: Algebra I

INSTRUCTOR INFORMATION

- Instructor Name: James (Jim) Bassett (He/Him)
- Office Hours: 1:40 - 2:30 (PM)
- Office Location: Video Game Design Classroom (room 138)
- Phone: 425.348.2233
- Email: bassettjb@mukilteo.wednet.edu
- Class Website: <https://vgd.mrbassett.org>
- Best Way to Contact: Emails are generally answered within 24 hours.

COURSE MATERIALS

- Required Materials:
 - Scientific Calculator (graphing OR non graphing are acceptable). The dollar store variety works perfectly.
 - USB Flash Drive with at least 4GB allocated to this program. If you do not own one, you may check one out for use.
- Software:
 - Unity (free software, version to be announced prior to class start)
 - Visual Studio, Processing (both are free)

- Paint.NET (most recent versions of each)
- Photoshop (you will receive a license from Mukilteo School District)
- All Software is provided at school, downloading for home use is recommended.

LEARNING OBJECTIVES

- **Learning Objectives**
 - Students will become proficient in C# Programming, Game Design Workflow, Managing Game Development in Unity, Software Version Control, Vector Mathematics, Collision Mathematics, Matrix Mathematics and Parametric Equations. Students will gain an introduction to Animation Principles, Interactive Story Development and Character Development. Students will work in teams using Agile Scrum methodology.
- **OSPI Frameworks**
 - A complete list of topics, learning objectives and outcomes, and industry competencies may be found in the OSPI Frameworks document. Please visit the class website for access to this document.
- **Certification Opportunities**
 - This course has opportunities for students to earn *Unity* Industry Certifications. See <https://unity.com/products/unity-certifications> for details. Students must pay for their Unity certification exams. Sno-Isle TECH Skills Center can assist any student with financial relief for needed materials or equipment for this course. We are also able to connect you with resources for barriers to school attendance. A google form link can also connect you to financial assistance: <https://forms.gle/JTLEc1fAhqbFnTkbA> Please ask!

ASSIGNMENTS AND GRADING

- **Assessment Criteria and Grading Policies**
 - Grading is determined on a straight points system (Points Earned / Points Possible)
 - Assignments will be graded on one of the following scales:
 - Standard Scale: Normal daily work and tests are assessed on percentage correct or completed (depending on the assignment).
 - Project Scale: Project expectations are listed and worth 75% of project's points for completion. Additional points may be earned via project enhancements. Successfully completing the objective will rate a grade of 75%, with going "above and beyond" netting extra points. This is consistent with industry, where being innovative is not a "bonus", it's a requirement. Students are responsible for taking their projects to the "next level".
 - Letter grades are converted from percentages according to the Mukilteo School District grading scale. Please consult the student handbook for this information.
- **Late / Missing Assignments Policy**
 - Because students learn at different rates, many of the assignments have *flexible* due dates and may be completed for full credit prior to the end of each grading period. However, certain assignments and projects may have strict deadlines and due dates. These assignments may not be submitted for credit after the due date. On Schoology, assignments that may not be submitted late contain [! !] in their title.

- **Grading communication**
 - Grades are updated/maintained on the Schoology platform used in Mukilteo School District. Students and parents have access to this site. Grades are updated weekly.
- **Academic Honesty and Integrity**
 - Students are held accountable for completing their own work. Any work that is not completed by student teams must be properly cited.
 - Violations include, but are not limited to:
 - Plagiarizing, copying, or submitting any part of another person's work (written, visual, or auditory) as representing one's own work.
 - Distribution/Sharing/Receiving of class assignments or test information in written, electronic, or verbal form to/from another student without teacher permission. Students in physical or electronic possession of unauthorized academic materials, whether requested/used or not, may be subject to disciplinary action.
 - Using "crib notes": Any use of unauthorized notes on tests/assignments (written or electronic devices of any kind).
 - Altering or Accessing Official School Documents: A student shall not alter official school documents, either paper or electronic, or open school documents not specifically addressed to the student.
 - Suspected and confirmed instances of academic dishonesty will be referred to administration for documentation and/or possible disciplinary action.
- **Accommodations**
 - Sno-Isle TECH Skills Center can support accommodations for learning and health needs. The same as your sending school, we need updated paperwork that states what accommodations are needed. Please turn in any updates to your learning and accommodation plans to me or the Study Center staff.

CLASS PROCEDURES AND POLICIES

- **Attendance: Absences**
 - If you miss class for any reason, you must first check in at the main office to bring an "admit" slip to class. Also, have your absence excused by your parents or guardians. They should call the attendance office at 425.348.2247 or email scattendance@mukilteo.wednet.edu. These absences must be cleared within three school days of the absence.
 - Please consult the student handbook for additional information related to attendance.
- **Attendance: Tardies**
 - If you are tardy to class, please check in at the main office to have your record changed from "Absent" to "Tardy". Repeated tardiness will require your parents / guardians to be notified and may result in further disciplinary actions.
- **Cell Phones**
 - Cell phone usage is at the discretion of the instructors of our program and may vary depending on the course content. There are specific locations in the classroom where cell phones may be used with instructor permission. Cell phones should not be used at your

workspace (unless with permission). You may be asked to put your cell phone in your backpack or be taken to the main office if their usage interferes with your classwork.

COURSE INFORMATION & EXPECTATIONS

- Sno-Isle Tech Skills Center is administered by Mukilteo School District, and follows MSD School Board Policies and Procedures.
- The most important aspect of this career path, repeated over and over and over again by professionals in every area of the industry, is a love and passion for games, game design and the process. It's not enough to be someone who enjoys playing games for several hours a day - your focus has to be on how you can create something new, better, more innovative and more fun. If this class feels like "work", this industry isn't the one for you... and that's OK! One of the goals of this class is to help you decide what you want to do with your future, and if that future includes a career in game design, that's great. If it is going somewhere else but doing game design as a hobby, that's great too... and if you realize that you DON'T have a passion for this, that's great too because you won't spend a ton of time in college only to find out you've spent a bunch of time, money and effort to get a job you hate.
- As you have probably noticed, this course involves a LOT of math. Most of our math is trig or precalculus level. I am operating under the understanding that all students have at minimum completed algebra and generally some amount of geometry. Having taken math beyond that is definitely helpful but not assumed by this class - I will be teaching any higher level concepts.
- This course is approximately 1/3 math, 1/3 programming and 1/3 design and art. Therefore, if any of these topics is something you are particularly uncomfortable with, this may not be the course for you. I don't expect you to be an expert in these things (if you were, you probably wouldn't need the class!) but I do expect your best attempt at quality each and every time. Many of our projects involve some level of drawing or digital art, I do not expect professional grade art (I'm horrible at drawing myself) but I do expect that the student strives to improve over time.

Getting Help:

- As industry preparation, it is important that I model industry techniques. One aspect of this is my policy on help. It is expected that most of you will have problems somewhere in the curriculum, this is totally normal. Understanding how to research solutions to problems is part of the technology industry and I will typically model this by helping you construct a valid search on the internet, then guide you to ask other students in the program (usually beginning with our second year students).
- During lectures, if you don't understand something you need to speak up or notify me via email. We move fairly fast in this class, and if you miss something, it could adversely affect your future learning. I realize that sometimes I move quickly or may explain things in ways you don't understand (plus everyone learns differently) but you need to be responsible for your learning and let me know when you don't get something. Help me help you learn.

- During projects/assignments and other tasks - I gradually phase in this policy, but basically I expect that during non-lecture times you attempt to get answers using resources you have rather than coming to me for everything. In the industry, I won't be there to help you so you need to learn to help yourself. The first point of contact should definitely be your teammates. Second point of contact should be books, web and other reference materials or students. If you have already attempted these two things THEN you should check with me.

Second Year Options:

- Second year students are *invited* to attend. Being invited into the second year program is dependent upon whether or not you will benefit from being a second year, if there is enough material to warrant another year, and do I feel that you will be successful in a second year, independent program. You will also assume a leadership role as a second year student and must demonstrate that you can grow in this area. At the current time, I provide a limited number of 2nd year slots (4-5 per session) with slots being prioritized by class ranking, ability/desire to work with/help/guide other students and, since the course will be largely independent, whether the student has a clear goal and plan in place for their second year. Students with poor grades (less than 80%), inability to work as part of a team, or significant attendance/discipline problems will not be welcome in the 2nd year program.
- You may have noticed teamwork mentioned multiple times throughout this document. During my time working in the tech industry, I had the opportunity to speak with a number of industry professionals, including designers, programmers, artists, tools programmers, localization experts, business managers, producers, and project leads, and they all agreed that the two assets most highly desired in a game designer are *Passion for the Industry* and *Teamwork* (in that order). As a result, those two things are the things I try to develop the most in my classroom. While grading in teams isn't always "fair", it is how things are evaluated in the "real world" and students need to learn team building skills. We will adopt the SCRUM methodology for working in teams and adhere to the ceremonies associated with this team structure.

COURSE CALENDAR MILESTONES

- 1st Quarter: Game Design Document (GDD) Project
- 2nd Quarter: First Complete vertical slice with Q2 Team Project
- 3rd Quarter: "Challenge" vertical slice
- 4th Quarter: Showcase Project & Unity Certification Exams

I hope you enjoy this course and learn a lot. Those of you who work hard will find this course rewarding, slackers will find it immensely frustrating. Do your best and push the envelope, and you will be successful.

Mukilteo School District does not discriminate in any programs or activities on the basis of sex, race, creed, religion, color, national origin, age, veteran or military status, sexual orientation, gender expression

or identity, disability, or the use of trained dog guide or service animal and provides equal access to the Boy Scouts and other designated youth groups. The following employees have been designated to handle questions and complaints of alleged discrimination: Civil Rights Coordinator and Title IX Coordinator Simone Neal (425-356-1319), NealSR@mukilteo.wednet.edu, Section 504 Coordinator Lisa Pitsch (425-356-1277), PitschLA@mukilteo.wednet.edu, and the ADA/Access Coordinator Karen Mooseker (425-356-1330), MoosekerKW@mukilteo.wednet.edu. Address: 9401 Sharon Drive in Everett, WA. Inquiries regarding ADA/Access issues at Sno-Isle TECH Skills Center should be directed to Wes Allen, Director (425-348-2220) AllenWR@mukilteo.wednet.edu. Address: 9001 Airport Road in Everett, WA 98204.