**Course Syllabus  
GameIT**

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**Office Hours: Prep from 10:50 – 11:30 & 1:35 – 1:50**

**Course Description**GAME:IT is an introduction to computer programming through game design. The focus of this curriculum is to build a strong foundation in the full spectrum of game development. GAME:IT takes a look at both coding and building games, but also dives into theories that differentiate games from each other.

**Course-Specific Learning Objectives**   
Students will learn:

* Technical skills like programming, graphic design and animation, testing/debugging and other skills that are needed for game development, but are also transferable to all types of industries.
* How to form and work in project development teams
* How the engineering design cycle is used to design games and solve all types of problems.
* How physics & math play a critical role in making games realistic.
* How to develop, program and market an original game.

**Topical Outline**

Listed below are major areas of content typically covered in this course.

1. Technical Skills
   * Programming through drag-n-drop method
   * Programming by breaking down tasks into events & actions
   * Follow technical and increasingly complex programming instructions in order & detail
   * Program original game projects
   * Use digital design resources to draw and animate sprites, objects, platforms, backgrounds and loops
   * Become familiar and competent in using game engines (Construct 2); open files, save files, create & program original material, integrate separate files into a final game project, create & edit audio sound effects & music
   * Technical writing; user instructions, game directions, game rules, & document development processes within a development team
2. Creative, Innovative & Critical Thinking
   * Learn steps of the engineering design cycle (discover, design, develop, deliver & evaluate) & how it works as a practical problem solving method
   * Use gained technical skills to improve game programs & create, design & program original working games
   * Troubleshoot existing game programs to fix bugs and ensure performance
   * Test fellow classmate’s games to ensure performance
   * Perform self-evaluations of projects against the required established directives
   * Perform evaluations of classmate’s projects against the required established directives
   * Develop a marketing plan for original programmed game to include; target audience, current competition, delivery options, product pricing, logo design, & strategy to spend budgeted funds.
3. Communication & Collaboration
   * Form game development teams to achieve directive of creating an original game
   * Assign tasks to members of development tea to achieve directive of creating original game
   * As a team, prepare a game design proposal
   * Use the engineering design cycle to achieve directive of creating an original game
   * Project management; students will have opportunity to lead a development team, assign tasks, evaluate progress, facilitate communication among team members and ensure that the project is completed within the set deadline
   * Prepare weekly project status reports
   * Conduct in-class presentations, including a demonstration of an original game
4. Using Digital Research Tools
   * Use appropriate Internet websites to gather & analyze research on a variety of subjects including; game development, marketing statistics, color & design theory, post-secondary education options & careers in game development & technology
   * Use built-in curriculum help resources to research problems & develop solutions
5. Engineering, Physics & Math
   * Learn how the process used in designing & developing software can be applied to other design & development projects
   * Learn how basic physics concepts like gravity, acceleration, velocity, speed, trajectory, Newton’s Laws of Motion, force & elasticity are used in game development
   * Use knowledge of math & physics to evaluate behavior of games in the “virtual world” as compared to the “real world”.
6. Further Career, STEM & Post-Secondary Education Options
   * Research how technical & communication skills used in game design translate to other technology industries & businesses
   * Research required post-secondary diplomas, certificates & degrees needed to gain employment in game development & other technology based industries
   * Research career trends, wage data, & employment opportunities in game development & technology based industries

**Grading Criteria/Course Evaluation**

Assessments 30% Projects 40%

Final Game Production 30%

Grading Scale

A = 93-100% C = 73-77.9%

A- = 90-92.9% C- = 70-72.9%

B+ = 88-89.9% D+ = 68-69.9%

B = 83-87.9% D = 63-67.9%

B- = 80-82.9% D- = 60-62.9%

C+ = 78-79.9% F = 59.9% & lower

**Materials Needed**

Binder/Folder

Notebook/Loose leaf paper

Pen/Pencil

**Student Requirements**

All students have responsibility for the following:  
1. To attend all classes, except when excused, and to be on time to all classes.   
2. To make necessary arrangements for making up work when absent.  
4. To be aware of and comply with all school policies, regulations, and procedures.   
5. To be aware of and comply with local, state, and federal laws.  
6. To respect and maintain school property.  
7. To express ideas in a manner that will not offend or slander others.  
8. To recognize and respect the rights of others.

* **Professional** **Conduct and Communication are expected.**

Formal and professional conduct is expected of you at all times in lecture, lab and on campus. Your practice of study, communication, politic, inter-personal and group interaction skills, generally accepted and expected of a medical-professional, begins and / or continuously improves in this class. Pro-actively shared, cooperative assistance is highly valued in the professional setting because it is a critical factor in providing quality health care and quality science. Because unprofessional, disruptive, and / or rude behavior demonstrated by you is harmful to the quality of health care in the professional setting to which you aspire, its demonstration in this educational setting toward anyone, including me, is unacceptable and will result in your immediate discharge from the classroom / lab. Your grade and your continued membership in the course will be negatively affected based upon the severity of the offense.

* **Cheating / Plagiarism** - *Cheating / Plagiarism are not tolerated in any form.*

**Cheating defined:**

* Copying, in part or in whole, from another’s test or other evaluation instrument or obtaining answers from another person during the test.
* Using or consulting, sources or materials not authorized by the instructor during an examination
* Altering or interfering with grading or grading instructions
* Any other act committed by a student in the course of his or her academic work, which defrauds or misrepresents, including aiding or abetting in any of the actions defined above
* Talking or consulting during the test with another person
* Giving / providing in any way, information to other students that allows the student an undeserved advantage on an exam or quiz, such as telling a peer what to expect on a make-up exam or prepping a student for a test in another section of the same class.
* **Consequences of academic dishonesty**, un-acceptable behavior**:**

Upon the first infraction of academic dishonesty, the instructor may do one or more of the following:

* Give a lower or failing grade on the assignment or exam
* Give a lower or Fail grade in the course
* Refer the student to the principal for student disciplinary action.