

MARIST

Intro to Gaming

Summer Pre-College 2025 CMPT 190

Lecture classroom DY 1016

Computer lab DY 1036

Presentation rooms DY 1016 & 2011

Monday - Friday 9:00 a.m. - 5:00 p.m.

Saturday 9:00 a.m. – 12 noon

Program Director

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Faculty

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Teaching Assistant

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General Information

Course Description:

This course uses an experiential approach to video game development. We introduce core game design principles while practicing video game creation via modern game development tools. Beginning with guided solo activities and progressing to independent group work, students build games of increasing complexity and sophistication, culminating in a multi-level game of their own design. We incorporate relevant concepts from the fields of Computer Science and Digital Media, including layers, events & actions, sprites & animation, storyboarding, level design, collision detection, and physics. Exploration and experimentation are strongly encouraged. The course concludes with live video game demonstrations for students and their families.

Textbooks:

- Fullerton, T., Game Design Workshop, 5th Ed., 2024, AK Peters/CRC Press
- Nystrom, R., Game Programming Patterns, 2014 – gameprogrammingpatterns.com
- Godot Engine 4.0 Documentation, docs.godotengine.org
- Additional articles and readings may be provided via Brightspace.

Other materials:

- Godot Engine 4.3 or 4.4 <https://godotengine.org/>
- Git Source Control – <https://desktop.github.com/> or <https://git-scm.com/>
- Additional digital tools and resources may be provided via Brightspace.

Credits Allocated: 3

Student Learning Outcomes/Goals

Course Objectives: The successful student will...

- Recognize and understand key concepts and methods used in video games.
- Distinguish genres and types of video games, as well as platforms for running games.
- Articulate and discuss game design principles using appropriate terminology.
- Appreciate the social, emotional, and ethical impacts that games can have.
- Create, curate, and use game assets such as objects, sprites, sounds, and levels.
- Demonstrate event-driven techniques, including the use of events and actions.
- Understand the development cycle and elements of effective video game design.
- Create video games from scratch using game creation tools studied in this course.

Course Policies

Attendance Policy: Attendance is mandatory for all classes and academic activities. Students are expected to arrive at class on time and participate fully in all class discussions and activities. Failure to adhere to these expectations may result in removal from Summer Pre-College.

Use of Cell Phone and other technology: The use of cell phones and other technology in class should not be used to record other students, faculty, and staff, unless requested by the Program Director/Faculty for educational purposes. Students should not be using their phones or other technology during class unless there is a sanctioned academic reason.

Dress Code: You must dress appropriately for the final presentations, which means attire that is professionally appropriate for the field. For game design, please check out videos of GDC talks or similar conference presentations to get a sense for what is acceptable. For regular class sessions, daily casual attire is fine, but please avoid clothing that displays offensive language or may otherwise be a distraction and do not wear pajamas to class.

Participation: Meaningful discussion and exchange of ideas helps to foster an effective learning environment. Learning is a meta-activity; it takes place when we reflect, consciously or unconsciously, on our actions and experiences. The means that your engagement in the classroom is essential for both your own learning and my assessment of the same. Here are some other reasons why you should participate freely in class:

- Taking an active role in class gives you agency in your own learning experience.
- I most likely will not know that you have a question unless you ask it.
- Questions are opportunities for discovery and insight; there are (almost) no stupid questions.
- Speaking up helps not only yourself, but also your peers because they often have the same questions.

Etiquette: We strive to cultivate a safe environment in which to foster learning, and to that end we must approach the class and each other with respect and understanding. To that end, I expect you to be on time for each class, return to class after breaks, and keep your mobile device silent and out of sight during class. For any online interactions, please follow Virginia Shea's rules of *Netiquette* (<http://www.albion.com/netiquette/corerules.html>).

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Learning to Learn: Capable professionals know how to solve problems, even in the absence of complete knowledge. To that end, I will encourage and at times require you to practice finding things out for yourself. There will be occasions when you need to look things up and find out things on your own to complete an assignment. This is an important skill, and one that will serve you for the rest of your life, so we might as well begin practicing now.

Exams & Quizzes: An exam/quiz may cover material presented up to the class in which it is administered. I do not grant makeup opportunities for exams/quizzes that are already past. If you anticipate missing an exam/quiz, please arrange with me in advance to take it prior to its originally scheduled date.

Criteria for Programs & Projects: All programs must be free of syntax errors to receive any credit. Programs that compile/interpret and execute cleanly but contain logic errors will be graded based on the severity of the errors and how well your work demonstrates your approach to solving the problem. Remember, neatness and style count. If you hand in a program that works, but that does not adhere to reasonable coding standards, is inadequately commented, or is poorly designed, you will be penalized. Good habits are important, and I will reward you for developing them, and penalize you otherwise.

Assessments & Grading

Grading Policies:

Grade Scale:

Grade	<u>Minimum %</u>
A	94
A-	90
B+	87
B	83
B-	80
C+	77
C	73
C-	70
D+	66
D	60
F	0

Proposed Schedule (Subject to minor variation, including regarding guest speakers)

Date	Session	Topics	Deliverables
PRE-WORK: PREPARE			
6/2 – 6/28		Game design, role of a designer; structure of games Getting started with Godot Engine; learn about GitHub	First 2D & 3D Games
WEEK 1: EXPLORE & DESIGN			
Sun 6/29	Afternoon	Course overview & ice breakers, review of Godot engine	
Mon 6/30	Morning	Review game design basics; review GDScript and code fundamentals	Flappy Bird Clone
	Afternoon*	Types of games, game elements; UI Canvas, Godot signals	
Tue 7/1	Morning	Rules of play, resources, conflict; 3D scenes, handling input actions	
	Afternoon	Story vs narrative, characters; Game state, the animation editor	
	Guest	Liam Harwood – Narrative Scripter, <i>Ghost Story Games</i>	
Wed 7/2	Morning	Game systems, dynamics; Random numbers, instantiating scenes	Side-scrolling platformer
	Afternoon	Concepts and brainstorming; Game design documentation	
	Guest	Kim Coterwas – UI Engineer, <i>Infinity Ward</i>	
Thu 7/3	Morning	Non-digital prototyping; Cameras, character controllers	
	Afternoon	Digital prototyping; Music and sound effects, visual effects	
	Guest	Danielle Anderson – Game Designer, <i>Snowbright Studio</i>	
Fri 7/4	Morning	Game development jobs, team structure; Lighting and 3D models	Point-n-click Story
	Afternoon	Development stages and workflow; Level transitions, save/load state	
Sat 7/5	Morning	Team building and brainstorming; HALF DAY - NO AFTERNOON CLASS	High Concept
WEEK 2: CREATE & PLAY			
Mon 7/7	Morning	Playtesting, observations, and data; AI and enemy behavior	Draft GDD
	Afternoon	Balancing, bugs vs features; character animation	
	Guest	Chris Ravosa – VR & Gaming Engineer, <i>Major League Baseball</i>	
Tue 7/8	Morning	Fun, player types and motivation; Tweening, particle effects	
	Afternoon	Teamwork, more planning and design; Project work	
	Guest	Erick Latshaw – Programmer & Paul Harden – Designer, <i>Freelance</i>	
Wed 7/9	Morning	Video games industry; Project work	Project Prototype
	Afternoon*	Prototype demos; Project work	
Thu 7/10	Morning	Pitching and marketing your game	Final GDD
	Afternoon*	Play-testing your projects; Project work	
Fri 7/11	Morning	More playtesting! Practice pitch	Pitch Slides
	Afternoon	Bug-squashing party!	
Sat 7/12	Morning	Final Exhibitions – LT 019 @ 9:00 - 11:00 AM EDT	Pitch & Demo

* SPC Workshop – class released early at 4PM

Anticipated Pre-Work

Pre-work for the Game Design program will be posted in our course learning management site called Brightspace, which will be available beginning on June 2, 2025. All materials and assignment descriptions will be accessible at the time the site opens. The work will include reading two chapters in our course textbook and submitting your written reflection on the reading. Additionally, you have the option to watch a video which will further expand your learning. You will also be asked to complete two guided coding lessons that will introduce you to the Godot game engine software and the GitHub code management platform. Again, all assignment details will be available in our site beginning on June 2, 2025.

Academic Statements

Statement on Academic Honesty

Marist University is a learning community dedicated to helping students develop the intellect, character, and skills required for enlightened, ethical, and productive lives in the global community of the 21st century. Students are expected to pursue excellence in their education while being honest about their work and fair to other members of the learning community. All work presented to instructors for evaluation must reflect their own ideas and effort and must properly acknowledge any contributions of others. Students should expect this honesty and fairness in others as well. As members of the Marist learning community, all students should adhere to the principles of academic integrity as set forth in the Marist Academic Integrity Policy.

Statement for compliance with the Teach Act (Public Law 107-273 Â§ 13301)

Materials in this course may be subject to copyright protection.

Statement on Accommodations and Accessibility

Students with disabilities who believe they may need accommodations in this class are encouraged to contact the Office of Accommodations and Accessibility at (845) 575-3274, Donnelly Hall 226 or via email at accommodations@marist.edu as soon as possible to better ensure that such accommodations are implemented in a timely manner. Marist's guidelines for instructors to comply with the Americans with Disability Act (ADA) are located here: <https://www.marist.edu/student-life/community/accommodations-accessibility/guidelines-instructors>

Statement on Diversity and Inclusion

The University's academic mission is immeasurably enriched by students with diverse experiences. Our finest efforts as intellectual beings heavily rely on the exchange of ideas. Interactions in our classrooms among persons and groups with diverse backgrounds, ideologies, and experiences facilitate these efforts by allowing us all to be more reflective about the varied historical and social contexts in which we work and learn. For faculty and students to continue being leaders inside and beyond academia, we must ensure that we consider the diversity of all who comprise our communities and foster a climate in which those diverse influences are respected and valued. In this course, we will challenge each other's thinking while working collaboratively to ensure that the classroom is a space of safety and bravery. Our classroom offers an environment where individuals of varying opinions, experiences, and backgrounds are able to be free to learn without fear of being silenced. Evidence of these efforts will manifest in

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readings, lectures/class discussion, seminars, and group projects. Aspects of diversity include, but are not limited to, race, ethnicity, color, nationality, sex, gender, gender identity, gender expression, class, sexual orientation, religion, age, ability, and veteran status. Students who would like to be identified in a manner other than what is indicated on the course roster can contact me privately via phone, email, web conference or face-to-face meeting to indicate name, pronoun, and any other preferences they may have.

Statement on Title IX

Marist University is committed to providing a safe learning environment for all students. If you or someone you know has experienced sexual harassment, including sexual assault, dating or domestic violence, or stalking, support is available. Please contact the Title IX Office at titleix@marist.edu or (845) 575 - 3799 or visit www.marist.edu/title-ix to file a report. Please be aware that faculty and staff are required to disclose incidents of sexual harassment or other potential violations of the Marist University Discrimination, Harassment, and Sexual Misconduct Policy to the Title IX Office. To speak to a confidential resource who does not have this reporting responsibility, contact Counseling Services at (845) 575 - 3314, Health Services at (845) 575 - 3270, or Spiritual Life and Services at (845) 575 - 3000 (x2275).

For more information about reporting options and resources at Marist University, please visit <https://www.marist.edu/title-ix>.