Computer Game Programming
Assunpink Center

Computer Game Programming prepares students with the knowledge and skills necessary for the challenging and rewarding field of game programming and the video game industry. Game programming and development courses reflect the dynamic and ever-evolving nature of the technology utilized in game development and related industries. Students gain the technical expertise necessary for realizing and enabling the creative vision of game designers. This program will prepare our students for a number of career pathways, such as game designer, software engineer, artificial intelligence programmer, graphics engineer, and user interface scripter.

Our program prepares individuals for the application of computer programming to the development of computer games. Our students will engage in topics such as character and story development, computer programming, computer graphics, game design, game physics, human-computer interaction, human-centered design, and usability. Students will articulate and solve complex logic problems associated with programming interactive game systems and apply effective industry-standard design, production, and testing techniques through all phases of game development. All Computer Game Programming students join their respective Career Technical Student Organization, and Technology Student Association, and have the opportunity to participate in our Esports Club. Students will earn industry-valued credentials in Oracle Java Programming and a Certified App Developer from the Institute for Certification of Computing Professionals. *NOTE* Students are expected to have a strong background in Algebra and be concurrently enrolled in Algebra II or equivalent.

Computer Game Programming I
Grade Level: 11   Credits: 20

This course will prepare students to create, execute, and document clear and effective code in programming languages in order to prepare them to earn their Oracle Java Programmer certification. Through resources such as Project Lead The Way, Unity Learn, and Roblox, students experience game engines relevant to professional game development. Integrate methods and techniques for constructing realistic, dynamic gameplay experiences, including game AI, game physics, 2D and 3D, and interface design. Students will articulate and solve complex logic problems associated with programming interactive game systems through the UnityLearn Platform and apply effective industry-standard design, production, and testing techniques through all phases of game development in order to earn their Unity Certified User certificate.

Computer Game Programming II
Grade Level: 12   Credits: 20

In year two (2), students will develop effective industry-standard design, production, and testing techniques through all phases of game development and adhere to the standards and expectations of the professional game development community, respect for all people and cultures, ethical decision-making, and the ability to function effectively as a member of a team. Students will have the opportunity to become Certified App Developers and be certified in app development by the Institute for Certification of Computing Professionals.

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Industry Valued Credentials & Certifications
Oracle Java Programming
Android Certified Application Developer Unity Certified User

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Updated on 09/12/2025

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