



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, Technology Student Association, and have the opportunity to participate in our Esports Club. Students will earn industry-valued credentials in Oracle Java Programming, Android Certified Application Developer, and Unity Certified User. **NOTES* Students are expected to have a strong background in Algebra and be concurrently enrolled in Algebra II or equivalent. Students are expected to have completed at least 150 hours of instructional time before taking the certification exam in SWIFT. Students who pass the certification exam will earn a digital badge they can share in a resume, portfolio, email, or in online professional networks.*

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. Through the UnityLearn platform, 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 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. The Students will learn Android Studio for Android app development and earn their Android Certified Application Developer certificate. The students will also learn a robust and intuitive programming language, Swift, created by Apple, and have the opportunity to earn their iOS Application Developer with Swift Associate certification.



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Industry Valued Credentials & Certifications

Oracle Java Programming
Android Certified Application Developer Unity Certified User

