Description

The computer gaming certificate program is designed to provide a game development skill set that the student can apply to domain-specific applications in the student's major. The skill set includes architecture of game engines, art design and computer graphics for gaming, and game software development.

In this certificate program, students learn to apply gaming technology to the rapidly growing video game industry and to business, medicine, geography, biotechnology and education. Examples of projects include:

- building a game that teaches linear algebra by incorporating trigonometric rules into the game design
- creating a game that teaches correct sentence construction to beginning learners of English
- creating a game to help patients with physical therapy
- creating an interactive virtual world for corporate training
- designing a game platform incorporating geographic information systems
- inventing a surgical simulation to educate medical students

At a Glance

- **College/School**: Ira A. Fulton Schools of Engineering
- **Location**: Tempe campus

Program Requirements

Certificate Map (Archives)
2021 - 2022 Certificate Map
Students will complete nine credit hours of core courses (including a final capstone project) and nine credit hours of elective courses. The certificate requires 12 credit hours of upper-division coursework. Students need to allow at least three years to complete the certificate program due to the prerequisite structure.

**Core Courses -- 9 credit hours**

- CPI 111: Game Development I (CS) (3)
- CPI 211: Game Development II (3)
- CPI 441: Gaming Capstone (3)

**Electives -- 9 credit hours**

- CPI 311: Game Engine Development or SER 332: Introduction to Graphics and Game Development (3)
- CPI 321: Fundamentals of Game Art (3)
- CPI 394: Game Design Fundamentals (3)
- CPI 411: Graphics for Games or SER 432: Game Engine Architecture (3)
- CPI 421: 3-D Modeling and Texturing (3)
- CPI 462: Design for Learning in Virtual Worlds (3)
- CPI 484: Internship (3)
- FMS 394: Video Games and Narrative (3)
- SER 431: Advanced Graphics (3)

Depending on a student's undergraduate program of study, prerequisite courses may be needed in order to complete the requirements of this certificate.

**Enrollment Requirements**

The computer gaming certificate is open to any student admitted to an undergraduate degree program at ASU and in good academic standing. This certificate can also be used by interdisciplinary studies BA students as part of their degree program.

All students are eligible to take CPI courses. Students who want to declare the certificate need to complete the undergraduate certificate form on the registrar's website and submit it to the School of Computing, Informatics and Decision Systems Engineering Academic Advising Center located in Centerpoint, Room 105. Interdisciplinary studies students need to contact their advisor to add the computer gaming concentration to their degree program.

A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.
Career Opportunities

Students can advance their career options with an undergraduate certificate. The certificate in computer gaming helps students become more marketable to employers in the gaming industry by adding this specialization to complement their major program of study.

Contact Information

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