

GAME PROGRAMMING - MINOR

College of Sciences and Humanities
 Department of Computer Science
www.kent.edu/cs

About This Program

Level up your skills with the Game Programming minor. Gain expertise in game design, development and programming while learning from experienced faculty and using industry-standard tools. This minor is a perfect complement to a major in computer science, digital media production and many more. Read more...

Contact Information

- Feodor F. Dragan and Augustine Samba | ugradinfo@cs.kent.edu | 330-672-9120
- Speak with an Advisor

Program Delivery

- **Delivery:**
 - In person
- **Location:**
 - Kent Campus

Admission Requirements

Admission to a minor is open to students declared in a bachelor's degree, the A.A.B. or A.A.S. degree or the A.T.S. degree (not Individualized Program major). Students declared only in the A.A. or A.S. degree or the A.T.S. degree in Individualized Program may not declare a minor. Students may not pursue a minor and a major in the same discipline.

Program Requirements

Minor Requirements

| Code | Title | Credit Hours |
|---|--|--------------|
| Minor Prerequisite | | |
| MATH 11010 | ALGEBRA FOR CALCULUS (KMCR) | |
| Minor Requirements | | |
| CS 13001 | COMPUTER SCIENCE I: PROGRAMMING AND PROBLEM SOLVING | 4 |
| or CS 13011 & CS 13012 | COMPUTER SCIENCE IA: PROCEDURAL PROGRAMMING and COMPUTER SCIENCE IB: OBJECT ORIENTED PROGRAMMING | |
| CS 23001 | COMPUTER SCIENCE II: DATA STRUCTURES AND ABSTRACTION | 4 |
| CS 23022 | DISCRETE STRUCTURES FOR COMPUTER SCIENCE | 3 |
| CS 38101 | INTRODUCTION TO GAME PROGRAMMING | 3 |
| Minor Upper-Division Electives (30000 or 40000 level), choose from the following: | | |
| AGD 33010 | COMPETITIVE GAMING | |
| AGD 33030 | GAMES FOR IMPACT | |
| CS 47101 | COMPUTER GRAPHICS | |

| | |
|------------|--|
| CS 48101 | GAME ENGINE CONCEPTS |
| CS 48102 | GAME DEVELOPMENT PRACTICUM (ELR) (WIC) |
| SPAD 45022 | EVENT PLANNING AND PRODUCTION |
| SPAD 45034 | ESPORT MANAGEMENT |

Minimum Total Credit Hours: 20

Graduation Requirements

| Minimum Minor GPA | Minimum Overall GPA |
|-------------------|---------------------|
| 2.000 | 2.000 |

- Minimum 6 credit hours in the minor must be upper-division coursework (30000 and 40000 level).
- Minimum 6 credit hours in the minor must be outside of the course requirements for any major or other minor the student is pursuing.
- Minimum 50 percent of the total credit hours for the minor must be taken at Kent State (in residence).

Program Learning Outcomes

Graduates of this program will be able to:

1. Understand the essential concepts, principles and theories related to computer science and game programming.
2. Understand game programming basics and data structures in C# and C++.
3. Understand game design and development using game engines.
4. Obtain industry-ready game programming skills through hands-on projects.
5. Collaborate with other team members in groups to complete game development projects.

Full Description

The Game Programming minor prepares students for a career in interactive game entertainment. Students explore a variety of game programming components, including the theoretical concepts (2D/3D graphics, game engines, artificial intelligence, physics and user interface) and practical programming skills using computer programming languages (C, C++ and C#).

The Game Programming minor features elective courses across disciplines and an interdisciplinary capstone that is a team-based game development project to procure knowledge and acquire practical skills pertaining to game development after having completed all the core courses.

Students in the Game Programming minor write and debug code to develop games. Students interested more in applying design concepts and using design tools should view the Game Design minor.