# New Program Report

**Date Submitted:**
10/19/2023

## Institution
Fontbonne University

## Site Information

**Implementation Date:**
8/15/2022 12:00:00 AM

## Added Site(s):


## Selected Site(s):

Fontbonne University, 6800 Wydown Boulevard, St. Louis, MO, 63105-3098

## CIP Information

**CIP Code:**
110204

**CIP Description:**
A program that prepares individuals to apply the knowledge and skills of design and computer programming to the development of computer games. Includes training in character and story development, computer programming, computer graphics, game design, game physics, human-computer interaction, human-centered design, and usability.

**CIP Program Title:**
Computer Game Programming

**Institution Program Title:**
Game Development

## Degree Level/Type

**Degree Level:**
Bachelor's Degree

**Degree Type:**
Bachelor of Science

**Options Added:**

Collaborative Program:
N

## Mode of Delivery

Current Mode of Delivery

Hybrid

## Student Preparation

Special Admissions Procedure or Student Qualifications required:
None

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Specific Population Characteristics to be served:
n/a

## Faculty Characteristics

Special Requirements for Assignment of Teaching for this Degree/Certificate:
Fontbonne is accredited by the Higher Learning Commission (HLC) and complies with HLC minimum faculty qualifications.  In particular, faculty generally must have a degree in the discipline that is one level higher than offered.  In doctoral programs, faculty must have a terminal degree and demonstrate research and accomplishments commensurate with a doctoral program. In some cases, we will also hire faculty that do not meet these criteria but do meet the "tested experience" criteria that we developed to comply with the HLC criteria.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:
While this may vary depending on the year and the exact courses chosen by students (including general education courses), we estimate at least 60% of courses will be taught by full-time faculty.

Expectations for professional activities, special student contact, teaching/learning innovation:
All Fontbonne faculty are expected to be up-to-date on their discipline.  Full-time faculty, as part of the annual review process, are expected to document professional activities and innovation in the classroom that improves student learning.  Fontbonne maintains a low student to faculty ratio, and all faculty have extensive student contact.

## Student Enrollment Projections Year One-Five

| Year 1 | Full Time: 5 | Part Time: 0 | |
|---|---|---|---|
| Year 2 | Full Time: 5 | Part Time: 0 | |
| Year 3 | Full Time: 5 | Part Time: 0 | Number of Graduates: 2 |
| Year 4 | Full Time: 5 | Part Time: 0 | |
| Year 5 | Full Time: 5 | Part Time: 0 | Number of Graduates: 2 |

**Percentage Statement:**
n/a

## Program Accreditation

Institutional Plans for Accreditation:
None

## Program Structure

**Total Credits:**
120

**Residency Requirements:**
n/a

**General Education Total Credits:**
42

**Major Requirements Total Credits:**
80

**Course(s) Added**

# DEPARTMENT OF HIGHER EDUCATION & WORKFORCE DEVELOPMENT

## New Program Report

| COURSE NUMBER | CREDITS | COURSE TITLE |
|---|---|---|
| CIS 226 | 3 | Content and System Design |
| CIS 499 | 3 | Senior Synthesis |
| Electives | 12 | Electives |
| CIS 498 | 1 | Senior Portfolio |
| CIS 451 | 3 | .NET Programming Environment |
| PSY 335 | 3 | Cognitive Psychology |
| MTH 150 | 4 | Calculus with Analytic Geometry I |
| CIS 161 | 4 | Advanced Programming using C++ |
| CIS 456 | 3 | Capstone Project: Building a Game |
| PSY 100 | 3 | Introduction to Psychology |
| CIS 256 | 3 | Unity I: Working with Unity |
| PSY 310 | 3 | Social Psychology |
| ART 223 | 3 | Introduction to Graphic Design |
| CIS 210 | 4 | Object-Orientated Porgamming (Java) |
| ART 323 | 3 | Graphic Design II |
| CIS 120 | 3 | Overview of Computer and iNformation Science |
| CIS 406 | 3 | Unity II: Advanced Unity Programming |
| CIS 126 | 3 | Introduction to Games |
| CIS 455 | 3 | Machine Learning |
| CIS 288 | 0 | Portfolio A |
| CIS 200 | 3 | Scientific Computing Languages |
| MTh 115 | 3 | Introduction to Statistics |
| CIS 160 | 4 | Computer Science I |
| CIS 250 | 3 | Algorithms and Data Structures |

**Free Elective Credits:**
0

**Internship or other Capstone Experience:**
Successful completion of the capstone course

## Assurances

I certify that the program will not unnecessarily duplicate an existing program of another Missouri institution in accordance with 6 CSR 10-4.010, subsection (9)(C) Submission of Academic Information, Data and New Programs.

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I certify that the program will build upon existing programs and faculty expertise.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

Contact Information

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Phone: 314-889-4679

# Fontbonne University     2023-2024 Undergraduate and Graduate Catalog

## Game Development, B.S.

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### The student outcomes for the BS in Game Development degree program are the following:

1. Students will be able to critically analyze and evaluate games as well as their themes, mechanics, and other components

2. Students will be able to synthesize creative and technological perspectives and apply those principles to the development of games

3. Students will gain an appreciation of the nature of games as an artistic medium, technology product, and cultural force

4. Students will acquire the necessary mastery of programming and the Unity engine to successfully build games

5. Students will be able to apply theoretical principles of game design and product development to the process of game creation

In addition, students will acquire these skills and abilities:

- Successfully sit for the Unity Certified User, and Unity Certified Associate exams
- Successfully sit for the Unity Certified Programmer exam
- Robust skill in the use of C# to program games
- Understanding of the .NET framework and other uses for C#
- Understanding of the fundamental principles of game design as a whole, as well as its component elements such as content design, systems design, narrative design and gameplay programming
- Analyze games as technology products, works of art, and cultural forces
- Understanding of the product cycle in game development
- Master the use of the Unity engine
- Design, create and release a fully realized digital game

## Courses Required for the Major (46 Credits)

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- CIS 120 - Overview of Computer and Information Science **Credit(s): 3**
- CIS 126 - Introduction to Games **Credit(s): 3**
- CIS 160 - Computer Science I **Credit(s): 4**
- CIS 161 - Advanced Programming using C++ **Credit(s): 4**
- CIS 200 - Scientific Computing Languages **Credit(s): 3**
- CIS 210 - Object-Oriented Programming (Java) **Credit(s): 4**
- CIS 226 - Content and System Design **Credit(s): 3**
- CIS 250 - Algorithms and Data Structures **Credit(s): 3**
- CIS 256 - Unity I: Working with Unity **Credit(s): 3**

- CIS 288 - Portfolio A **Credit(s): 0**
- CIS 406 - Unity II: Advanced Unity Programming **Credit(s): 3**
- CIS 451 - .NET Programming Environment **Credit(s): 3**
- CIS 455 - Machine Learning I **Credit(s): 3**
- CIS 456 - Capstone Project: Building a Game **Credit(s): 3**
- CIS 498 - Senior Portfolio **Credit(s): 1**
- CIS 499 - Senior Synthesis **Credit(s): 3**

## Courses Required in Other Disciplines (22 Credits)

- ART 323 - Graphic Design II **Credit(s): 3**
- ART 223 - Introduction to Graphic Design **Credit(s): 3**
- MTH 115 - Introduction to Statistics **Credit(s): 3**
- MTH 150 - Calculus with Analytic Geometry I **Credit(s): 4**
- PSY 100 - Introduction to Psychology **Credit(s): 3**
- PSY 310 - Social Psychology **Credit(s): 3** OR PSY 335 - Cognitive Psychology  **Credit(s): 3**

## Elective Courses (12 Credits)

## Choose four from the following (12 Credits)

- ART 202 - Intro to Web Design **Credit(s): 3**
- ART 302 - Web Design II **Credit(s): 3**
- CIS 421 - Compiling Theory and Programming Languages **Credit(s): 3**
- CIS 460 - Artificial Intelligence **Credit(s): 3**
- CIS 472 - Android Programming **Credit(s): 3**
- CIS 473 - iOS Programming **Credit(s): 3**
- CIS 474 - Software Engineering I **Credit(s): 3**

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