Program Overview
This is a 24 credit certificate program exploring video game creation. The certificate is ideal for students who want to acquire skills needed for game design and programming. The certificate will utilize HTML5, Javascript, Tumult Hype and Phonegap to recreate classic video games for both the Desktop and mobile platforms. The capstone class will introduce students to some of the concepts of mobile app development for both the iPhone and Android platforms. This certificate may be completed apart from a degree program or may be selected as an emphasis in the Computer Programming AAS degree.

The student should have above average communications and math skills. He/she should exhibit qualities of patience, perseverance, and preciseness, and should enjoy working in a team environment and also be able to work independently. All programs emphasize training for industry certification.

Career Opportunities
Graduates find excellent opportunities as computer programmers in business, manufacturing, government and education. Jobs for computer programmers for all types of computer systems are found throughout the country with opportunities for good earning and rapid advancement.

Program Outcomes
1. Graduates will design and code gaming software applications.
2. Graduates will apply industry standard design skills to support their applications.
3. Graduates will apply design and programming skills to non-game web projects.
4. Graduates will apply best practices for performing effective web usability tests.

Program Faculty
Darren Pearson
darren.pearson@saintpaul.edu

Program Requirements
☐ Check off when completed

This program is designed for individuals who have computer programming knowledge or are currently employed in the computer programming field.

Course
Cr
☐ CSCI 1450 Web Fundamentals/HTML ............ .4
☐ CSCI 2440 Client Side Programming 1 ............ .4
☐ DGIM 2521 2D Web Animation .................. 2
☐ DGIM 2530 Web Based Game Design 1 ............ .4
☐ DGIM 2531 Web Based Game Design 2 ............ .4
☐ DGIM 2586 Digital Sound ..................... 2
☐ DGIM Technical Elective(s) .................... .4

Any 4 credits of DGIM classes will be allowed, although the following classes are recommended.
DGIM 1483 Photoshop 1 - 2cr
DGIM 1484 Photoshop 2 - 2cr
DGIM 1490 3D Animation Fundamentals - 4cr
DGIM 2560 Illustrator - 4cr

Total Program Credits .................. 24

Program Start Dates
Fall, Spring, Summer

Course Sequence
The following sequence is recommended for a part-time student. Not all courses are offered every semester. Please contact the Program Faculty for course sequence.

First Semester
CSCI 1450 Web Fundamentals/HTML ............ .4
DGIM 2521 2D Web Animation .................. 2
Total Semester Credits .................. 6

Second Semester
CSCI 2440 Client Side Programming 1 ............ .4
DGIM Technical Electives .................... 2
Total Semester Credits .................. 6

Third Semester
DGIM 2530 Web Based Game Design 1 ............ .4
DGIM Technical Electives .................... 2
Total Semester Credits .................. 6

Fourth Semester
DGIM 2531 Web Based Game Design 2 ............ .4
DGIM 2586 Digital Sound ..................... 2
Total Semester Credits .................. 6

Total Program Credits .................. 24

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 250+ or grade of “C” or better in READ 0722 or READ 0724 or EAPP 0900

Writing: Score of 250+ on Reading Comprehension or grade of “C” or better in ENGL 0922 or EAPP 0900

Quant. Reasoning, Algebra & Stats:
Score of 250+ or Adv. Algebra & Functions:
Score of 215+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

See back of this guide for Course Chart
Web Based 2D Game Development CERTIFICATE (continued)

(24 credits)

The below chart illustrates the courses required for completion of this certificate.

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**Introductory**

- DGIM 2521 2D Web Animation
- CSCI 1450 Web Fundamentals/HTML

**Intermediate**

- DGIM 2530 Web Based Game Design 1
- CSCI 2440 Client Side Programming

**Advanced**

(offered once per year)

- DGIM 2531 Web Based Game Design 2