Vanier College
Faculty of Science & Technology
Computer Science Department

Course Title	: Game Programming 1	**Teacher**	: Nicolas Bergeron
Course #	: 420-141-VA	**E-mail**	: through MIO
Sections	: 0003 and 0004	**Office**	: D-222
Semester	: A19	**Office Hours**	: By appointment
Ponderation	: 2 - 3 - 2	**Prerequisites**	: -

General Description:

This is an introductory project-based course where students will produce an original video game. This course introduces students to a basic game engine, a tool that can be used to build a variety of interactive games. The course is designed to be a fun and engaging introduction to programming and team projects as well as application of mathematical concepts. Students will be encouraged to think creatively and logically as well as to work collaboratively in order to implement an original game project presented to their peers at the end of the semester.

In addition to computer programming concepts, students will learn different aspects of video game development including basic image editing, animation, working with sounds, visual effects, etc. This course does not assume any previous programming knowledge.

Course Objectives

- Programming using a Basic Game Engine
- Understanding mathematics by implementing game scenarios
- Editing contents for game environment (images/sounds/animations)
- Producing a simplified Game Design Document
- Collaborating on a Programming Project using Source Control
- Delivering a Presentation

Competencies Related to this Course

00SW Develop gaming or simulation applications

- Analyze the application development project.
- Prepare the computer development environment.
- Generate real or virtual world representations.
- Program the game or simulation logic.
- Produce the documentation.

Textbooks and materials

- No textbook, course notes will be available on Omnivox throughout the semester.
- (Optional) Introduction to Programming with Greenfoot: Object-Oriented Programming in Java with Games and Simulations, 2nd Edition.
  By Michael Kolling, Published by Pearson. ISBN-13: 978-0-13-405429-2

Software to be used

Greenfoot will be used to learn the general fundamentals and principles of programming by creating your very own fun and interesting games and simulations.

The following Software will be used and each of them is free to download/install:

1) **Greenfoot** (for game programming)
2) **Gimp** (for image editing)
3) **Audacity** (for audio editing)

Teaching and Learning Techniques

- Class time will be divided between lectures and laboratory activities. Lectures will be used to introduce new concepts, which will then be further explored during hands-on activities.
- All classes take place in a computer lab. You will normally use the lab periods to put concepts into practice through work on assignments and exercises.
- Assignments and handouts will be available on the college's Omnivox system: https://vaniercollege.omnivox.ca.

Evaluation Procedures, Tentative dates and the Breakdown of Marks

Lab exercises, assignments:

Assignment 1	Week 5	10%
Assignment 2	Week 10	10%

Exams (2):

Test 1	Week 6	20%
Test 2	Week 11	20%

Team Game Project

Project Proposal	Week 9	5%
Game Design Document	Week 11	10%
Game Project Implementation	Week 15	20%
Project Presentation	Week 15	5%

- You will be informed of the exact date of each test at least one week in advance.
- To pass the course, you must obtain (1) an overall passing grade and (2) a passing grade on the average of the tests.
- No late assignments will be accepted. If you need more time for an assignment, speak to your teacher well before the assignment is due.
- If you miss a test and provide a doctor's note that clearly states that you were too ill to write the test then you will be allowed to take a makeup test.
- An unexcused missed test will receive a grade of 0.

Attendance

Attendance is strongly recommended for all classes and labs. Students are responsible for all material covered and all work assigned, even if absent from class.

Lab Policies

Anyone caught playing games, installing, or using illegal software in the labs may be fined up to $50. During the lab periods you are expected to work on your assignments.

It is not permitted to use the internet during lab periods outside the scope of the lab.

No video or audio recordings may be made or photographs taken in class without the specific prior permission of the instructor.

College Policies & Procedures

It is the student's responsibility to be familiar with and adhere to all Vanier College Policies. A summary of the course-level policies that apply in this and all other Vanier courses can be found under "Course-Level Policies" in Important Vanier Links on Omnivox, or by following this link: http://www.vaniercollege.qc.ca/psi/course-level-policies/.

Complete policies can be found on the Vanier College website, under Policies.