英文課名: Introduction to Game Programming
中文課名: 遊戲程式設計

一、課程說明(Course Description)
Game development is a hot topic in the modern entertainment industry. In this course, we will introduce a popular game engine, Unity3D. In the first half of the course, we will present various components in Unity3D that are fundamental for the beginner of game development. The remaining lectures will cover advanced topics necessary for producing games with large-scale, high quality, and rich interactivity. Every student is requested to participate in a team-project with the capacity of up to 4 persons. Each team will present a complete and original game at the end of the semester. Those outstanding works will be recommended to join a domestic game competition.

二、指定用書(Text Books)
NA

三、參考書籍(References)
● 人氣遊戲這樣做！Unity3D 遊戲設計實例講堂 第二版

四、教學方式(Teaching Method)
● Self-study the online video lectures at home.
● Doing practices and quizzes in the course
● Joining the discussion session after the quiz.

五、教學進度(Syllabus)
● Unity3D 引擎基本介紹
● 用 C# 撰寫 Unity script
● 控制物理引擎與物件 transformation
● 創建地圖(地形、植被、風、水、天空)與使用粒子特效
● 音效設計與 Unity GUI
● 動畫系統、動畫曲線、key frame、finite state machine、blend tree 及匯入動畫
● Unity2D 引擎介紹
● 建立多人網路連線
● 如何提升遊戲效能
● 使用 Navigation

六、成績考核(Evaluation)
● Assignments: 30%
● In-Class Quiz: 20%
● Final Project: 50%

七、AI 使用規則
有條件開放，請註明如何使用生成式 AI 於課程產出。