

# COMP2007

# Game Development

Module information

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# Module aims

- Establish an understanding of skills required to develop games.
- Develop technical and creative skills for games production.
- Implement prototypes using industry standard production methods.

# Sessions

Tuesdays @9am: Coding session

Fridays @9am: Lab session

No sessions in easter  
break!

# Set Exercises/Assignment

Check the DLE Assignment section for documentation

Two handins:

- Set Exercises
  - Deadline: 11<sup>th</sup> March
  - 3 exercises (art, code, sound)
- Assignment
  - Deadline: 18<sup>th</sup> April
  - A small 3D scene with custom models, a character and simple interactions

# Required software

Download and install Unity hub (free)

<https://unity3d.com/get-unity/download>

**Unity Version 2021.2**

GIMP (Free)

- Image editor for textures etc
- Get latest version

<https://www.gimp.org/>

# Unity Essentials

Please refer to the Unity Essentials section for:

- Unity account setup
- Installing Unity hub & Unity Editor
- Scripting help guides

# Week 1

## Code (Tuesday)

- Intro to Module
- Assignment
- Tools & documentation
- Random number generation & probabilities

## Lab (Friday)

- 3D Rendering in Unity
- Design process

# Week 2

## Code (Tuesday)

- Vector programming

## Lab (Friday)

- 3D modelling with ProBuilder



# Week 3

## Code (Tuesday)

- Rotation Operation in Unity

## Lab (Friday)

- Texturing and materials with ProBuilder and GIMP

# Week 4

## Code (Tuesday)

- Vector in Unity

## Lab (Friday)

- Lighting in Unity

# Week 5

## Code (Tuesday)

- 3D Physics
- Camera control in cinemachine

## Lab (Friday)

- Animation Creation

# Week 6

## Code (Tuesday)

- Game mechanics

## Lab (Friday)

- Scene Optimisation and Debugging

# Week 7

## Code (Tuesday)

- Audio in Unity

## Lab (Friday)

- Creating UI art with GIMP

# Week 8

Reading week: CW2 Preparation

# Week 9

## Code (Tuesday)

- Navigation in Unity

## Lab (Friday)

- Game Ready Assets

# Week 10

## Code (Tuesday)

- Shaders
- Unity shader creation tool

## Lab (Friday)

- Terrain Tools



# Week 11

## Code (Tuesday)

- Performance in Unity

## Lab (Friday)

- Particle and VFX

# Week 12

Tuesday

- Q&A