Topics may include:
Graphical Game Programming, Physics and Mechanical Simulation for Games, Rendering and Graphical Pipelines, Graphical Engines and Pipelines, Middleware, and Rapid Game Prototyping.

2D/3D Graphics Programming, Debugging, and Testing

- 2D Game Development Recap
- Game Engine Programming
- Collisions/Responses
- Animations
- Game Play
- GUI Elements
- Placeholder Assets
- Texturing Basics/Skins & Materials

Some Topics for Discussion are:

- Team & Project Management for Rapid Prototyping
- Individual Management for Rapid Prototyping
- People & Management for Rapid Prototyping
- Working with artists and audio specialists—getting assets

Assessment:

Students will be advised of all matters relating to summative assessment at the outset of the course. Overall course grades will represent a balanced assessment of achievement in relation to all stated learning outcomes.

Weighting	Nature of assessment	Learning outcomes
40%	Group: Rapid Game Prototype: Alpha—Feature Complete Testing (Prototype and Test Report).	1,2,3
40%	Group: Rapid Game Prototype: Beta—Game Testing (Prototype and Test Report). It is possible, depending on the complexity of the game, that this is an Alpha Stage 2 delivery, partially Game Complete.	1,2,3
20%	Individual Post-mortem of Findings and Individual Prototype Journal.	4

Learning and teaching approaches:
The lecturer must consider the capabilities of the students entering the course to ensure they understand some key concepts before embarking on more complex tasks (for instance the students capability in undertaking more complex elements, should we recommend a 2D Rapid Game Prototype as the project and merely introduce 3D concepts rather than expect their use in the game).

Lecturers support students in developing team skills and their project plans to support the development of the project—specific emphasis is given to the idea of pre-planning and attempting to get gameplay features into the prototype as quickly as possible. Students are advised to use place-holder assets or prebuilt assets that are easily plugged into the game engine.

Only if time permitting should the students attempt to create a Beta Game—that is one that is game complete; smaller games better afford the ability to create a Beta Game in the timeframe allowed for this course.

Lecturers will stop students aiming for a Gold game (unless this is achievable)—that is feature complete, game complete, and polished game ready for publication. Perhaps, there is a possibility to aim for that goal if they work with game artists from another department or if the students themselves