

This complete beginner's course teaches the fundamentals of CRYENGINE 5 by taking you step by step through the process of building a finished "flappy boid" sidescroller-style game.

The course is available both as a series of video tutorials which you can view on our YouTube channel [here](#) and as a written PDF document (provided in the free [Flappy Boid course asset](#) on the Marketplace). We recommend that you watch and follow along with the video tutorials to see the game actually being built, and use the PDF version as a supplement resource, as it contains additional information and explanations.

In order to build this game, you'll need to download the free [Flappy Boid course assets](#) and [GameSDK assets](#) from the CRYENGINE marketplace. The course requires CRYENGINE 5.6.

While this course does not cover every single feature in CRYENGINE 5 (unsurprisingly), it's an ideal way to get up to speed with game design in CRYENGINE 5.6. Programming is not a part of this course; our Flow Graph visual scripting tool is used to script game mechanics.

Here's what you'll learn how to do in this course:

- Navigate the CRYENGINE interface, Editor, and tool set.
- Work with entities, including rigid bodies, cameras, AI tag points, brushes, particle effects, audio entities, and Designer objects.
- Create and edit materials and textures.
- Design and build a level.
- Import and use an animated mesh and animation loops using the Character tool.
- Use the Environment Editor and Level Settings to control sunlight, time of day, latitude and longitude, procedural volumetric clouds, wind, shadows, global illumination, and ocean parameters.
- Use the Level Explorer to manage, freeze, hide, rename, link and assign entities to layers.
- Control the position, movement, and behavior of entities through Flow Graph.
- Precisely position and modify objects using snap and alignment tools.
- Add, move, and control cameras and their properties; control the player's view.
- Utilize physics for realistic movement; selectively activate and deactivate physics on specific entities during game play.
- Detect and react to collisions between entities.
- Use and trigger particle effects, including sound effects and physical forces.
- Create audio triggers and ambiences; trigger and control them through Flow Graph.
- Create UI elements; configure, display, and communicate with them through Flow Graph using XML scripts.
- Script game mechanics and scorekeeping using Flow Graph.
- Understand and use entity components.
- Assemble and control animated characters, assigning materials, animations, and attachments and control it through Flow Graph.
- Use assets and functionality from the free GameSDK (Software Development Kit).
- Modify and selectively disable GameSDK functionality.
- Export a finished game to a stand-alone executable and test it.
- Use Console Variables to control the Editor and a stand-alone game.