

Video Render in Blender

Prompt

Create a marble obstacle course that makes use of physics simulations in Blender and record the marbles progress through the scene using a moving camera. The marble (i.e., sphere object) should behave as a rigid body under the influence of gravity. The marble should traverse through a series of objects or obstacles (e.g., shoots, pipes, planes, cones etc.) under the influence of gravity. Other forces can also be used to alter the motion, such as bounces, wind, and magnetics.

Once you have the obstacle course created and the simulation is functioning correctly so that the marble progresses from beginning to end, assign simple materials to the components.

Next, animate a camera so that it moves around to dynamically capture the progress of the marble; you can also animate other camera motions, such as changes in the focal length (i.e., zoom).

Render a video from the perspective of the moving camera.

Note: You will need to configure some lights.

Note: You can render using EEVEE as opposed to Cycles to speed up the process. However, the rendering will likely still be slow.

Note: Keep this pretty short so that it doesn't take an excessive amount of time to render (< 1 minute).

Deliverables

1. Provide a write-up that explains how the physics simulations were configured for your scene and how you chose to move the camera.
2. Video file of your rendered simulation.

Points

Up to 20 points will be assigned based on the following:

1. Video should play without issue
2. Marble should progress from the beginning to the end of the obstacle course
3. You must use at least one other force other than gravity (e.g., magnet, wind, or bounce)
4. Materials should be effective; the marble should be easy to see as it moves through the obstacle course
5. Lighting should allow the viewer to easily see where the marble is and how it is progressing
6. Camera motion is effective at capturing the movement within the scene