

e2020 Curriculum Briefing 3D Art II – Animation (EL5718)

Course Description

In this second-semester course, students will build on the 3D-modeling concepts and Blender software skills developed in 3D Art I to learn intermediate to advanced 3D-animation techniques. Using Blender, the world's most powerful open-source modeling tool, students will master the basics of animation—trajectory, lighting, bones, and movement—while learning how to apply traditional animation techniques to their 3D models. By the end of the course, students will have a solid foundation for pursuing further 3D modeling and animation projects. This course is suitable for students with no prior experience with 3D game design or digital media authoring tools, but it is recommended for students who are older. The course uses a difficult software program, and prior experience in 3D software may be helpful. Also, student computer speeds will greatly affect how long the course will take to complete.

This course is not aligned with any known state standards.

Topics of Study

- Animating a bouncing ball
- Animating moving light on a stage
- Animating a robot arm picking up and dropping a ball
- Animating a 3D character model, provided through the course, to create a walk cycle
- Animating an explosion of particles
- Animating fireworks
- Animating water spraying out of a provided 3D fountain model
- Animating a campfire

e2020 Curriculum Briefing (continued)

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Course Features

- The course uses Blender, a powerful and flexible open-source 3D-modeling software program, to model, render, and animate 3D graphics.
- The course provides step-by-step instruction on how to use Blender to model, render, and animate 3D objects.
- Interactive widgets and graphics help to illustrate and explain concepts related to 3D modeling.
- Each section of the course includes assignments that either help the student expand on work they've already done or explore 3D modeling in a new way.
- Starter files are provided for students to experiment with more complicated 3D models than what they would be able to create on their own.

Grading

Just as with our other e2020 courses, you always have the flexibility to tailor the grade weights for the course according to your own district, school, and student needs.

The default grades for this course are as follows:

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| • Assignments | 0% |
| • Essays | 0% |
| • Quizzes | 20% |
| • Tests | 10% |
| • Exams | 0% |
| • Projects | 70% |
| • Additional | 0% |