Summary

Physics for Animation Artists is a project of the Physics Department and the Animation / Illustration Program at San Jose State to develop curriculum materials to teach basic physics to art majors specializing in animation.

Just as learning anatomy helps artists draw realistic people, learning physics helps them to animate believable worlds.

Available on the project website:
- Stand-alone tutorials for art students
- Course materials for instructors
- Video reference for animation
- Curriculum for a General Education science course
- Master Classes scheduled in the SF Bay area

www.AnimationPhysics.com

Physics of Balance

The principles of balance also apply to CG objects. As characters move, the center of gravity must shift to support the objects weight. This is shown in the following examples of a lumberjack, a seated character, and a character in a standing pose.

Character animation in 3D software operates on the same principles as objects in our environment. Whether an object or a character is in motion, the principles of balance apply. This is true for an object such as a baseball or a hammer as well as a person such as a lumberjack, a seated character, or a character in a standing pose.

Physics of Timing and Spacing

Simple examples show how core principles can be applied to a falling baseball or a jumping character. Updated July 2009

Master Classes

Physics of Creating Action

Physics of Animation Tutorials

Physics of Character Animation