

## Training Course: 1 day Newton

This 1 day course will get you up and running from the 1st time you open the application and covers the workflow that so many advanced compositions are built on. Based on multiple lessons, this course takes you from nothing to dealing with interactive multiple colliding objects with gravity.

Newton is a 2D physics simulator for Adobe After Effects CS5 or later.

Newton takes the layers of the current composition and transforms them into rigid bodies. These bodies can collide with each other, slide, bounce, and react to gravity. Once completed the simulation is exported to After Effects using keyframes animation.

### At the end of this course you will be able to:

- Create compositions for Newton
- Send and return from Newton
- Understand and interact in the Newton interface
- Solve problems and work arounds
- Use 2D Newton in a 3D comp

### Using Newton for the 1st time

- Sending comp to Newton - returning back to After Effects*
- Creating new comps - Motion blur - frames range*

### Interface

- preview - solver - gravity - bodies*

### Body types

- static*
- kinematic*
- dynamic*
- dormant*
- AEmatic*
- dead*

### Gravity

- Magnitude*
- Direction*
- Take value from*
- Capture/Apply*
- Density*
- Friction*
- Bounciness*
- Color*
- Mesh Precision*

- Linear Velocity*
- Magnitude - Direction*

- Angular Velocity*
- Linear Damping*
- Angular Damping*
- AEmatic Damping*
- AEmatic Frequency*

- Saving and Loading Settings*
- Reset Scene*

### Simulation Preview

- Zoom*
- Background Color*
- Composition Bounds*

### Preview Options

- Default*
- Shapes*
- Shapes and Bounding Box*
- Shapes and Local Axes*
- Shapes and Joints*

- Solve, Pause and Restart commands*

### Solver

- Velocity Iterations*
- Position Iterations*
- Steps Per Frame*

- Separating Shapes*
- Keyboard Shortcuts*
- Applying Result*

### Dealing with Text

- Rectangular box*
- Create Shapes from Text*

### Dealing with Shapes

- shapes*
- pen tool*
- path property*

- Using After Effects parenting with Newton*
- 3D from 2D Newton*

- Using After Effects puppet tool to create soft bodies with Newton*
- After Effects keyframes and expressions in Newton*
- Using Newton for ease in and out*