# Mathematica @ Tufts University



### What is Mathematica?

Mathematica is a software package which is ideal for communicating scientific ideas, whether this is visualization of a concept in an intro-level course, or creating a simulation of a new idea related to research. Mathematica is used in virtually all of the world's top universities and colleges, and is commonly used in the following types of departments --- Mathematical Sciences, Physical Sciences, Business and Finance, Life Sciences, Engineering, Computer Science

#### How to Get Mathematica

*Mathematica* is currently available for any campus-owned machine (computer lab, office machine, or research station):

• Link to Reseach Computing installers

Mathematica can also be installed on:

• Faculty and staff personally-owned machines, click for Wolfram request form

The web site will ask whether you want a DVD shipment or download license for Windows, Mac OSX, or Linux

Students can install Mathematica on their personal machines and connect to the campus network license:

• Link to Reseach Computing installers

#### Tutorials to Learn Mathematica

The first two tutorials are excellent for new users, and can be assigned to students to learn *Mathematica* outside of class time.

- First Ten Minutes with Mathematica Shows most current tips and templates to get started with Mathematica, including free-form input
- Hands-On Start to Mathematica Review and assign to students as homework for more in-depth overview

Collection of tutorials to branch out and explore more specific applications and areas of Mathematica.

• <u>Learning Center</u> - Search Wolfram's large collection of materials for example calculations or tutorials in your field of interest

## Teaching with Mathematica

- <u>How To Create a Lecture Slideshow</u> Show a mixture of graphics, calculations, nicely formatted text, as slides with live calculations or animations in class
- <u>Assigning Student Projects (Video Tutorial)</u> Give students guided projects to explore concepts either through a Course Management System to supplement your text
- Full Collection of How To Tutorials Ranging from how to create animations to basic syntax information

## Research with Mathematica

- <u>Programming and Parallel Computing Basics (Video Tutorial)</u> Learn how to create programs and take advantage of multi-core machines or a dedicated cluster
- Scope of Field-Specific Applications Learn what areas of Mathematica are useful for specific fields