Mathematica @ Tufts University



What is Mathematica?

Mathematica is a software package 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 installed in the following locations:

• All computer labs maintained by IT

Mathematica can also be installed on:

• Faculty and staff campus machines, click here for Wolfram User Portal download site

Instructions: (1) Click link above, choose "Continue without signing in"

(2) Use organization email, @tufts.edu, and request Activation Key,

(3) Check email for link to download installer,

(4) Create WolframID and download installer,

(5) Run installer and enter Activation Key

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

• Student personal machines, click here for Student Wolfram User Portal download site

Instructions: (1) Click link above, choose "Continue without signing in"

(2) Use organization email, @tufts.edu, and request Activation Key,

(3) Check email for link to download installer,

(4) Create WolframID and download installer,

(5) Run installer and enter Activation Key

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.

- <u>First Ten Minutes with Mathematica</u> 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