Mathematica @ UMass Lowell



# 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 --- <u>Mathematical Sciences</u>, <u>Physical Sciences</u>, <u>Business and Finance</u>, <u>Life Sciences</u>, <u>Engineering</u>, <u>Computer Science</u>

## How to Get Mathematica

Mathematica is currently installed in the following locations:

• All computer labs maintained by Computing Services

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, @uml.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, @student.uml.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