More Octave/MATLAB resources

Octave Resources

At the Octave command line, typing **help** followed by a function name displays documentation for a built-in function. For example, **help plot** will bring up help information for plotting. Further documentation can be found at the Octave <u>documentation pages</u>.

MATLAB Resources

At the MATLAB command line, typing help followed by a function name displays documentation for a built-in function. For example, help plot will bring up help information for plotting. Further documentation can be found at the MATLAB <u>documentation pages</u>.

Introduction to MATLAB with Onramp

Made for MATLAB beginners or those looking for a quick refresh, the MATLAB Onramp is a 1-2 hour interactive introduction to the basics of MATLAB programming. **Octave users are also welcome to use Onramp** (requires creation of a free MathWorks account). To access Onramp:

1. If you don't already have one, create a MathWorks account at: <u>https://www.mathworks.com/mwaccount/register</u>

2. Go to: <u>https://matlabacademy.mathworks.com/</u> and click on the MATLAB Onramp button to start learning MATLAB!

MATLAB Programming Tutorials

These short tutorial videos introduce MATLAB and cover various programming topics used in the assignments. Feel free to watch some now and return to reference them as you work through the programming assignments. Many of the topics below are also covered in MATLAB Onramp. ***Indicates content covered in Onramp.**

Get Started with MATLAB and MATLAB Online

- <u>What is MATLAB?</u>*
- <u>MATLAB Variables</u>*
- <u>MATLAB as a Calculator</u>*
- <u>MATLAB Functions</u>*
- <u>Getting Started with MATLAB Online</u>
- <u>Managing Files in MATLAB Online</u>

Vectors

- <u>Creating Vectors</u>*
- <u>Creating Uniformly Spaced Vectors</u>*

- [Accessing Elements of a Vector Using Conditions](#)*
- [Calculations with Vectors](#)*
- [Vector Transpose](#)

Visualization

- [Line Plots](#)*
- [Annotating Graphs](#)*
- [Multiple Plots](#)*

Matrices

- [Creating Matrices](#)*
- [Calculations with Matrices](#)*
- [Accessing Elements of a Matrix](#)*
- [Matrix Creation Functions](#)*
- [Combining Matrices](#)
- [Determining Array Size and Length](#)
- [Matrix Multiplication](#)
- [Reshaping Arrays](#)
- [Statistical Functions with Matrices](#)

MATLAB Programming

- [Logical Variables](#)*
- [If-Else Statements](#)*
- [Writing a FOR loop](#)*
- [Writing a WHILE Loop](#)
- [Writing Functions](#)
- [Passing Functions as Inputs](#)

Troubleshooting

- [Using Online Documentation](#)*
- [Which File or Variable Am I Using?](#)
- [Troubleshooting Code with the Debugger](#)

✓ Complete