

# Computational Thinking with MATLAB

"Computational thinking is a fundamental skill for everyone, not just for computer scientists."

— Dr. Jeannette Wing, Columbia University

### Curriculum Resources: Downloadable teaching resources to shape your courses

| Science and Mathematics  | Engineering and Computer Science  | Social Science                        |
|--|---|---------------------------------------|
| <ul> <li>Calculus</li> <li>Different Equations and Linear Algebra</li> <li>Physics</li> <li>Biology</li> <li>Chemistry</li> <li>Earth, Ocean, and Atmosphere</li> <li>Neuroscience</li> <li>Numerical Computing with MATLAB</li> </ul> | <ul> <li>Introduction to Programming</li> <li>Introduction to Engineering</li> <li>Control of Mobile Robots</li> <li>Aerospace Engineering</li> <li>Bioengineering</li> <li>Digital Speech Processing</li> <li>Electrical Engineering</li> <li>Embedded Control and Mechatronics</li> <li>Mechanical Engineering</li> <li>Instrumentation and Measurement</li> <li>Teaching System Dynamics with Arduino</li> </ul> | • Finance • Econometrics • Psychology |

Teaching Science: mathworks.com/academia/courseware/teaching-science-with-matlab.html

 $MATLAB\ Course ware: \ mathworks.com/academia/course ware$ 

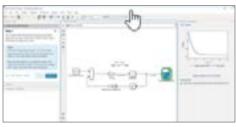
MATLAB based textbooks: mathworks.com/books

## **Software Tools for Teaching and Learning**

Students can interactively learn computational skills at their own pace, giving educators more time to teach.

- MATLAB Live Editor: Author and share interactive MATLAB notebooks
- MATLAB Grader: Develop and auto-grade MATLAB code assignments
- MATLAB Online: Use MATLAB in your web browser
- MATLAB Code Examples: Learn from and reuse MATLAB coding stories
- MATLAB Onramp: Learn MATLAB via free interactive online demos
- MATLAB Tutorials: Learn with step-by-step video tutorials







## Computational Thinking with MATLAB

Access, Teach, and Learn MATLAB

## Campus-wide MATLAB

*mathworks.com/campus-license*Learn about MATLAB for your school.

#### **MATLAB Online**

*mathworks.com/products/matlab-online.html*Use MATLAB via a web browser.



### **MATLAB Live Editor**

mathworks.com/live-editor.html

Write computational stories with interactive notebooks.



## **MATLAB Academic Online Training Suite**

mathworks.com/products/campus-wide-training.html



#### **MATLAB Grader**

*mathworks.com/products/matlab-grader.html* Create and auto-grade code-based assignments.



## MATLAB Onramp

*mathworks.com/learn/tutorials/matlab-onramp.html* Learn MATLAB via free interactive self-paced demos.



More on Computational Thinking: mathworks.com/discovery/computational-thinking.html

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