

**MATLAB Programming Best Practices**

**Course Number:** MTLB-114
**Duration:** 0.5 days

**Overview**

This MATLAB Programming Best Practices training course teaches attendees how to create high-quality, maintainable MATLAB programs. Students learn mechanisms for improving code legibility and robustness using standard industry coding conventions. In addition, participants discover common programming pitfalls, compatibility considerations, and easy-to-apply runtime performance tips.

**Prerequisites**

Attendees should have taken Accelebrate's [From MATLAB Scripts to Complete Programs course](file:////training/matlab-scripts-programs) or have equivalent knowledge. Students should already be comfortable using the MATLAB environment. Prior programming experience is neither assumed nor required for this course, but would be helpful.

**Materials**

All MATLAB training students will receive comprehensive courseware.

**Software Needed on Each Student PC**

* Any Windows, Linux, or macOS operating system
* A recent version of MATLAB

**Objectives**

* Use coding conventions to improve MATLAB code maintainability
* Apply best practices for writing maintainable, robust MATLAB code
* Isolate MATLAB code from data and functional edge cases
* Understand MATLAB compatibility and run-time performance tradeoffs

**Outline**

* Introduction
* The importance of maintainability, with specific recommendations
* Documentation principles and guidelines
* Using M-files vs. scripting
* Comparison of MATLAB function and data types
* GUI conventions & best practices
* Best-practices for improved code performance (speed)
* Writing robust fault-tolerant code
* Conclusion