

## Mastering MATLAB

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### Why MATLAB?

MATLAB is a widely used tool for numerical computation and data visualization. MATLAB is widely used in aerospace industry and is extremely useful for prototyping and testing new algorithms and numerical methods. MATLAB combines a high-level programming language with an extensive built-in toolbox, which allows building and testing your numerical recipes easily and straightforwardly. MATLAB also contains advanced graphic and visualization tools that will allow you to create clear and appealing figures.

### How much you need to know?

The module in *Advanced Topics in Astrodynamics and Trajectory Design* requires of you to have a basic knowledge and skill with MATLAB. This means that you should: easily navigate MATLAB desktop, be familiar with MATLAB syntax, be familiar with MATLAB data types, be familiar with basic functions and operations and be able to create your own scripts and functions.

Basically, the level of MATLAB necessary to tackle the course confidently should allow you to complete “Pre-Course Material Exercise 1”. If you feel you require some catching up and refreshment to do, see the resources of the following section.

### Resources:

1. Learning MATLAB from [Linkedin.com/Learning](https://www.linkedin.com/learning).

As students of Cranfield University, you have unlimited access to the learning resources in [Linkedin.com/learning](https://www.linkedin.com/learning). If you have not accessed it yet, please register following the instructions [here](#). Once registered, search the course Learning MATLAB and be sure that you have completed it before the start of the *Advanced Topics in Astrodynamics and Trajectory Design*.

2. Complete the Pre-Course Material by Prof James Whidborne. This can be found in the Lecture Material tab in Blackboard.

3. Have a look to some the books available in the Library. Just type MATLAB in the search engine of the library website, you will see 6 ebooks and some physical books in the Library. No pun intended, but I may recommend [MATLAB for dummies](#) for a start.