



Faculty of Engineering and Applied Science is pleased to present a seminar titled:

## A Tutorial / Workshop on MatLab

by

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**March 22, 2024, 2:30 – 4:30 pm, Education 388**

All are welcome and it is free to attend, however, [registration is required.](#)

### Outline:

1. Why use Matlab?
2. Layout: workspace and command window
3. .m files
4. Basic operations
  - a. Create matrices in different ways
  - b. Matrix arithmetic operations
  - c. Matrix manipulation: reshape, concatenation, etc.
  - d. Element-wise operations
  - e. Common mathematical functions and their operation on matrices
  - f. Statistical operations
  - g. Logical operations
  - h. Complex number operations
  - i. Basic mathematical derivations
5. Basic programming features
  - a. "if" semantics
  - b. Loops
  - c. Functions
  - d. Debugging
6. Graphic features
  - a. Graph plotting and editing
  - b. Plotting 3D graphs
  - c. Making Videos
7. Solving ODEs
8. Saving and loading data and files
9. Code optimization -- How to optimize the code by avoiding using "for" loop