

## E-MATLAB

**Objective:** Matlab is widely used in all areas of applied mathematics in education and research. Matlab software is built up around vectors and matrices. This makes the software particularly useful for linear algebra but it is also a great tool for solving algebraic and differential equations and for numerical integration. Matlab has powerful graphic tools and can produce nice pictures in both 2D and 3D. Matlab also has some tool boxes useful for signal processing, image processing, etc.

### **Introduction to MatLab**

- The dominance of MatLab over other languages
- Power of Matrix computations
- The application of Matlab in various fields of engineering

### **Matlab functions**

- Basic mathematical functions offered by Matlab
- Matrix computations

### **Matlab Modelling**

- Advanced mathematical functionalities of matlab
- Advanced system modelling using Matlab

### **Basic Electrical Circuit Analysis**

- Analysis of basic electrical circuits using Matlab
- Obtaining different characteristic plots

### **Introduction to Simulink**

- Applications of simulink in System modelling

- Modelling Basic electrical Circuit in Simulink and obtaining characteristic plots