



# REGENT EDUCATION & RESEARCH FOUNDATION GROUP OF INSTITUTIONS

**Course Name : Basic Knowledge about MATLAB – Unlocking  
the Power of Computational Excellence**

**Academic Year : 2022 - 2023**

## Course Curriculum

### **Objective:**

Equip participants with foundational knowledge of MATLAB, enhancing their capabilities and understanding of its functionalities and applications.

### **Module 1: Introduction to MATLAB**

- Overview:
  - An inclusive session that sets the stage for the course, providing participants with an understanding of what to expect.
  - An in-depth introduction to MATLAB, exploring its core features and the significance of its use in computational applications.

### **Module 2: Foundational Concepts**

- Arrays in MATLAB:
  - Understand the critical role of arrays, their creation, manipulation, and application in MATLAB.
- Mathematical Operations:
  - Dive deep into the varied mathematical operations that MATLAB supports, from basic arithmetic to more complex computational

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E-mail : [rerfkolkata@gmail.com](mailto:rerfkolkata@gmail.com), Website : [www.rerf.in](http://www.rerf.in)

*Campus Address:*

**Bara Kanthalia, Barrackpore  
P.O: Sewli Telinipara, P.S.: Titagarh  
Kolkata - 700 121  
Tel.: 033-3008-5442/432/431, Fax: 033-3008-5442**



*Regd. Office Address:*

**11/3, Biresw Guha Street  
7<sup>th</sup> Floor, Kolkata - 700 017  
Tel.: 033-3221-3013**



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tasks.

- Conditional Data Selection:
  - Learn the art of selecting specific data under certain conditions, enhancing the capability to handle and process data effectively.
- Working with Tables of Data:
  - Explore the functionalities associated with table data in MATLAB, understanding how to create, modify, and use tables effectively.
- Assessment I

### Module 3: Practical Insights and Application

- Hands-on Training and Practice:
  - Engage in practical exercises that reinforce learning and provide a real feel of MATLAB's capabilities.
- Assessment II
- Real-world Applications:
  - Delve into real-world scenarios where MATLAB shines, understanding its relevance and application in various industries and research areas.

### Module 4: Exploring Further with MATLAB

- Career Paths and Opportunities:
  - Discover the potential career avenues and opportunities that expertise in MATLAB can open up, from roles in academia to positions in cutting-edge industries.
- Assessment III

Course Outcome: By the end of this course, participants will have a robust understanding of MATLAB, its functionalities, and its vast applications, paving the way for them to explore and leverage its capabilities further.

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