### ABOUT CSC ACADEMY

- CSC Academy is promoted by CSC SPV and set up in 2017 to provide access for
  professional learning of diverse backgrounds and educational needs. The CSC
  Academy is a not-for-profit society under the Societies Registration Act 1860 (Act 21
  of 1860), as applicable to the Union of Delhi with its registered office in Delhi.
- CSC Academy addresses the need for Skilling India's youth for employment, entrepreneurship, and community enterprise. CSC Academy is further committed to teaching, delivering of specialized courses/ training programs, leadership, communication skills and promotion of entrepreneurship among the rural masses in India.
- It reaches into communities, develops skills of people from financially challenged backgrounds and acclimatizes them with the changing work environment. The core philosophy is to create courses that would help in creating and supplying trained manpower to the industrial spectrum as well as develop entrepreneurial talent.
- CSC Academy has initiated various Skill Development Courses with the following objectives:
- To provide the skill training in rural areas, locally accessed by rural youth Get them certified.
- Employment/Self-Employment Linkages.

### "ABOUT THE COURSE"

## "Acquire basic skills in MATLAB"

- CSC Academy brings online skill course on MATLAB with the industry experts. The programme offers basic skill training on MATLAB.
- The demand for MATLAB is about to flourish Indian market. MATLAB has the potential
  to grow by creating AI/ML Jobs, design-tech jobs, and start-ups across the country in
  the fields such as Programming, Manufacturing, Artificial intelligence/Machine
  Learning, Deep Learning, and additive manufacturing Robotics etc.

#### **TTT Program**

#### Course Fee:

**Certification:** After completion of the online course, CSC Academy & Match works joint certificate will be awarded to participants followed by an online assessment.

#### **Course Duration:**

- 30 Hours of online Training and Assessment.
- 20 Days, 5 Days a week (1.5 Hours per day)

## "Learning Outcome"

The course will give the fundamental knowledge and practical abilities in MATLAB required to effectively utilize MATLAB tool in technical numerical computations and visualisation. After the course candidates will be

- Able to use MATLAB for interactive computations.
- Familiar with memory and file management in MATLAB.
- Able to generate plots and export this for use in reports and presentations.
- Able to program scripts and functions using the MATLAB development environment.
- Able to use basic flow controls (if-else, for, while).
- Familiar with strings and matrices and their use.
- Able to work in Predictive Maintenance & Robotics.

# "Opportunities in Industries"

- Artificial Intelligence/ Machine Learning, Deep Learning & Programming
- Predictive Maintenance
- Industries in Automotive Sector
- Electronics
- Telecom
- IT-ITeS
- Many others use MATLAB software for doing data analytics
- Model-based design
- Build Artificial Intelligence algorithms and deep learning
- MATLAB has been recognized a leader in Data Science and Machine learning platform.
- · Robotics.

## "Who is this Course for?"

- The MATLAB course is designed for beginners.
- Basic Mathematics Knowledge required.
- School Kids, Engineers, Designers, Hobbyists, and anyone looking to learn Artificial Intelligence, Machine Learning, Deep Learning & Programming.
- All those who want to enhance their skill set and find a potential business & job opportunity in the space of MATLAB, Robotics, Predictive Maintenance, Artificial Intelligence/Machine Learning & Programming.

# "Course highlight"

- MATLAB is a high-performance language for technical computing. It integrates computation, visualization, Data analysis, exploration, and programming in an easyto-use environment where problems and solutions are expressed in familiar mathematical notation.
- MATLAB allows you to Implement and test your algorithms easily
- Develop the computational codes easily
- Debug easily
- Use a large database of built in algorithms
- Process still images and create simulation videos easily

- Symbolic computation can be easily done
- Call external libraries
- Perform extensive data analysis and visualization
- Develop application with graphics user interface

#### **MATLAB Courses**

- MATLAB Fundamental
- Machine Learning with MATLAB
- Deep Learning with MATLAB
- Image Processing

### **MATLAB Courses Modules**

- Basic arithmetic operators
- · Hierarchy of arithmetic operations
- Elementary functions
- Predefined constant values
- Attributes for plot
- Elementary matrices
- Special matrices
- Array operators
- Summary of matrix and array operations
- Matrix functions
- Anatomy of a M-File function
- Difference between scripts and functions
- · Example of input and output arguments
- Disp and fprintf commands
- Relational and logical operators
- Operator precedence
- Arithmetic operators and special characters
- Array operators
- · Relational and logical operators
- Managing workspace and file commands
- · Predefined variables and math constants
- Elementary matrices and arrays
- Arrays and Matrices: Basic information
- Arrays and Matrices: operations and manipulation
- Arrays and Matrices: matrix analysis and linear equations.