

Introduction

This course provides an introduction to MATLAB® fundamentals. It is designed to give students fluency in MATLAB, including the two popular toolboxes namely Statistical and Optimization toolboxes. The course consists of interactive lectures with students doing sample MATLAB problems in real time. Problem-based MATLAB assignments will be given with hands-on training by MathWorks professionals.

The participants will be provided handouts/course material from MathWorks comprising of step by step solutions / tutorials to a variety of problems.

Course contents

MATLAB Fundamentals

This module will provide a comprehensive introduction to the MATLAB technical computing environment. The module is intended for beginning users and those looking for a review. Topics will include:

- Data analysis
- Visualization
- Modeling
- Programming

Statistical Methods in MATLAB

This module will provide hands-on experience performing statistical data analysis with MATLAB and Statistics Toolbox™. Examples and exercises will demonstrate the use of appropriate product functionality throughout the analysis process, including:

- Data import and organization
- Exploratory analysis
- Confirmatory analysis
- Simulation

Optimization Techniques in MATLAB

This module will introduce applied optimization in the MATLAB environment, focusing on using Optimization Toolbox™ and Global Optimization Toolbox. Topics include:

- Defining the problem
- Writing objective functions
- Defining constraints
- Choosing solvers and setting options
- Using global optimization methods

Resource persons

The course instructors/faculty will be primarily from MNNIT and professionals from MathWorks Training Services.



The program is open to UG/PG students, research scholars, faculty members of engineering institutions and working professionals

Number of participants will be limited to **50** on first come first serve basis.

Registration

Registration fees –

Rs. 5000/- : Working Professionals / Faculty

Rs. 3000/- : Students

(A discount of 25% would be offered only to students of MNNIT Allahabad).

Payable in the form of a Demand Draft in favour of “**STCCADLAB - 2015**” payable at **Allahabad**.

Hard copy of the duly filled and signed registration form and duly approved by the Head of Department/ Institute, along with the registration fee should reach the coordinators on or before **June 2, 2015**. However, scanned advanced copy of registration form and DD may be sent through email for early registration. Fee in cash can also be paid by local participants.

[Mail the application form to:](#)

Dr. Mukul Shukla
Associate Professor

Or

Dr. Samir Saraswati
Assistant Professor
Department of Mechanical Engineering
MNNIT, Allahabad – 211004, U.P.

Email: mukulshukla@mnnit.ac.in
samir@mnnit.ac.in

Cell: 0-9451992782 / 08004926324

On prior request, accommodation may be provided to the participants on payment basis in the institute hostels / Guest House (EDC) (subject to availability). The participants have to bear their own travelling expenses.

APPLICATION FORM

Self Financed Short Term Course
on
**Matlab based Optimization and Statistical
Data Processing**
(June 12 – 17, 2015)

1. Name:
2. Date of birth:
3. Institution:
4. Educational qualifications:
5. Class / Branch (or)
Designation / Department:
5. Address for correspondence:

Phone:

E-mail:

6. Prior exposure to MATLAB:
7. Accommodation required - Yes/ No

Declaration

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the course. I also agree to inform the Coordinators in case, I am unable to attend the course.

Place:

Date: Signature of the candidate

Mr/Ms/Dr _____
is a student / employee of our institute and is hereby sponsored to participate in the **STC on MOSP**.

Place:

Date: Signature & Stamp of Head of Institution

About MNNIT Allahabad

Motilal Nehru National Institute of Technology (MNNIT), Allahabad (formerly MNREC) is one of the oldest RECs setup in the country. Since 1964 it has been a centre of technological excellence in the state of UP in particular and the country in general. The institute is funded by the World Bank TEQIP scheme and has constantly been rated amongst the top 15-20 government engineering institutions of the country. The institute offers 9 B.Tech., 23 M.Tech., MCA, MBA, MSW, MSc (Mathematics and Scientific Computing) and Ph.D. programs. The institute has 9 engineering, 3 basic sciences and a humanities department, in addition to a school of management studies. The institute is a fully residential, networked campus. MNNIT Allahabad is well connected by rail, road and air.

About Mechanical Engg. Department

Department of Mechanical Engineering is the leading department of the institute. It offers B.Tech. (in Mechanical and Production and Industrial Engg), M.Tech. (CAD-CAM, Design, Production, Product Design and Development and Thermal) and PhD. The department has 32 highly qualified faculty. More than 90 PhDs have been produced by the department which is also a QIP centre for PhD and MTech. The department has state-of-the-art laboratories and is equipped with latest software and equipments. The department also has liaison with reputed R & D organizations for imparting training and R & D services.

Self Financed

Short Term Course
On

**Matlab based Optimization and
Statistical Data Processing**

(June 12 - 17, 2015)

Patron

Prof. P. Chakrabarti
Director

Chairman

Prof. R. K. Srivastava
Head, Mechanical Engineering Department

Course Coordinators

Dr. Mukul Shukla
Dr. Samir Saraswati



Organized by

Department of Mechanical Engineering
Motilal Nehru National Institute of Technology
Allahabad – 211004, UP



In technical association with

 **MathWorks**
Accelerating the pace of engineering and science