

GOVERNMENT
ENGINEERING
COLLEGE, Valsad

Chemical Engineering
Department



Introduction to MATLAB & SIMULINK

16-02-2021

Details of Webinar

Webinar Title: Introduction to MATLAB and SIMULINK

Name of Expert: Mr. Dhiraj Jagtap

Designation: Engineer, Technical services-Mathworks, DesignTech systems Pvt Ltd.

Date of Webinar: 16/2/2022

Time: 11:00 A.M to 1:00 P.M

Faculty Coordinator: Prof. A. R. Magodara

No. of Registered Participants: 243

Learning Outcomes:

- 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.

Webinar description:

The Department of Chemical Engineering organized a Webinar on “Introduction to MATLAB and SIMULINK” on 16th February 2021. The webinar was organized for all students of Chemical Engineering Department. Following points were covered during the webinar:

- Brief History of MATLAB
- Introduction to MATLAB
- Introduction to Simulink
- Data Import & Export
- Data & Variables
- Calling functions
- Demo: Fuel Economy Analysis
- Demo : Creating Simulink Model

The session ended with vote of thanks by Prof. A. R. Magodara in appreciation to Mr. Dhiraj Jagtap for sharing his valuable time for interacting with students and faculties.

Glimpses of Webinar

Webinar on Introduction on MATLAB and simulink

01:02:40

Technical Computing Workflow

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The diagram illustrates the Technical Computing Workflow, which is a three-stage process:

- Access:** This stage involves gathering resources. It includes:
 - Files:** Represented by a folder icon.
 - Software:** Represented by a database icon and a code icon.
 - Hardware:** Represented by a circuit board icon.
- Explore & Discover:** This is the core development stage. It includes:
 - Data Analysis & Modeling:** Represented by a graph icon.
 - Algorithm Development:** Represented by a code block icon with the example code:

```
for k=1:maxX
    x = fft(dat);
    y = 20*log1
```
 - Application Development:** Represented by a block diagram icon.
- Share:** This stage involves distributing the results. It includes:
 - Reporting and Documentation:** Represented by PDF, doc, and html file icons.
 - Outputs for Design:** Represented by icons for a car, a wind turbine, and an airplane.
 - Deployment:** Represented by icons for MATLAB, Excel, .NET, .exe, C/C++, Java, and .dll files.

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Participants: +196, JP, KT, NS, NIKUNJ JOTANIYA, Dhiraj Jagtap, CHINTAN PANDYA, PARMAR HIMANSHUK...

Webinar on Introduction on MATLAB and simulink

58:08

MathWorks Product Family

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The diagram shows the MathWorks Product Family, which is organized into several categories:

- Event-Based Modeling**
- Physical Modeling**
- Real-Time Simulation and Testing**
- Verification, Validation, and Test**
- Simulation Graphics and Reporting**
- SIMULINK®**
Simulation and Model-Based Design
- Parallel Computing**
- Code Generation**
- MATLAB®**
The Language of Technical Computing
- Math, Statistics, and Optimization**
- Application Deployment**
- Database Access and Reporting**
- Applications:**
 - Control Systems
 - Signal Processing and Communications
 - Image Processing and Computer Vision
 - Test and Measurement
 - Computational Finance
 - Computational Biology

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