



EEE-19/2024-2025 Simulink Software Programming 20-01-2025 to 24-01-2025 NITTTR Bhopal

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Rationale

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Simulink is a MATLAB-based graphical programming environment for modelling, simulating and analysing multidomain dynamical systems. Its primary interface is a graphical block diagramming tool and a customizable set of block libraries. It offers tight integration with the rest of the MATLAB environment and can either drive MATLAB or be scripted from it. Simulink allows fast and cost-effective development of dynamic systems, including control systems, power system and power electronics. The many MATLAB toolboxes in diverse areas of engineering, science, and business augment the capabilities of Simulink. In addition to the toolboxes, there are a number of Simulink blocksets i.e. a collection of organized blocks available in the Simulink libraries. Dynamic systems can be simulated in Simulink by first creating a block diagram using the Simulink model editor, and then simulating the system represented by the model from a specified start time to a specified stop time.

Programme Outcomes

- 1.Create a simple Simulink model to simulate and further analyse the results.
- 2. Develop models of continuous-time, discrete-time, and hybrid systems.
- 3.Create reusable model components using subsystems and libraries.
- 4. Develop Simulink model for a given system.
- 5.Build hierarchy into a Simulink model for a given system.

Programme Content

Overview of MATLAB, Simulink Model, Libraries, setting up path, creation of model file, sinks, source, math operations, creation of subsystem, powergui, continuous time simulation model, discrete time simulation model, Symscape, debugging of Simulink model

Target Group

Faculty of Electrical & Electronics Engineering and allied disciplines

Coordinator & Co-Faculty

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