

Optimal Control with Model Predictive Control Toolbox

OEM: MathWorks • Duration: 1 Day (8 hrs) • Code: MW-OPTIMAL-CONTROL-WITH-MODEL-PREDICTIVE

COURSE MODULES & TOPICS

Day 1 of 1

System Modeling Techniques

- Model representations overview
- Linearization
- System analysis

Linear MPC

- Elements of traditional MPC
- Preparing a model for MPC
- Designing and tuning a linear MPC with the MPC Designer app

Adaptive MPC

- Operating point selection
- Adaptive MPC block
- State estimation

Nonlinear MPC

- Understand the use cases for nonlinear MPC
- Build a nonlinear MPC object
- Understand the state, cost and constraint functions and their Jacobians
- Implement nonlinear MPC for a nonlinear control problem