ELECTRO MECHANICAL AUTOMATION	L	T	P	TCP
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COURSE OBJECTIVES:

The main learning objective of this course is to prepare the students:

1. To provide a foundational understanding of the diverse applications of Electromechanical Automation products and solutions
2. To introduce the principles and practices of designing EM Automation functionality and addressing applications
3. To explore various motion controllers / Servo drives / VFDs, Electric Linear actuators and related applications assemblies to plastic parts.
4. To Sizing and selection of Motion controllers / Linear actuators for different applications
5. To Work on direct applications demo with the Motion controller and linear actuators

UNIT-I INTRODUCTION & ARCHITECTURE 6

Introduction to Motion and Control system & architecture- Applications - Gantry study

UNIT-II PROGRAMMING 6

Various motion controllers / PAC / PLC / Servo drives /Codesys programming – 1- Codesys Programming/ Ladder

UNIT-III LINEAR ACTUATOR 6

Introduction to Linear actuators (Belt / ball screw and Linear Motors) - Linear actuator programming lab

UNIT-IV 6

Motion sizing software / selection, Intro to Gear Heads, DD Motors and HMI - Various applications - Work shop

UNIT-V APPLICATIONS 6

Applications - Servo press and Gantry / Handling applications - Lab

TOTAL: 30 PERIODS

COURSE OUTCOMES:

At the end of this course the students are expected to:

CO1: Use Motion controller & its application.
CO2: Use Servo drive functions and it applications.
CO3: Write codesys programming.
CO4: Develop applications.
CO5: Acquire working knowledge on practical applications.