



## **GM Error Proofing Platform (EPP) Lab Course LMS 60383**

**(Version 1.0)**

### **Contact Information**

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### **Course Description**

This course is designed to familiarize participants with the application of the GM Error Proofing Platform standards. Upon successful completion of this course, participants will learn the use of templates, PLC set-up, Configuring the User Interface (UI), and Validation using runtime. Understand how to set up and troubleshoot EPP systems at the Track Zone and Footprint level.

### **Who Should Attend**

- GM: Controls Engineers, and Designers
- Suppliers: Controls Engineers, and Designers
- Contractors: Controls Engineers, and Designers

### **Student Materials**

- A student manual will be provided to students



## Course Outline

- **Module 1: Introduction**
  - Review basic assembly processes
  - Understand plant hierarchy
  - Familiarize with EPP architecture
  - Familiarize with EPP functionality
  - State the various EPP task types
  - Know the system limitations
- **Module 2: Runtime UI Basics**
  - Introduce the Runtime UI Environment
  - Learn how to navigate to the Track Zone Level
  - Familiarize with setting user preferences in the Track Zone
  - Identify the views available in the UI
  - Explain the ability to Shift Build Data
  - Rebuild the Track Zone level
  - Rebuild the Footprint level
  - Identify Main/Backup/Alternating Tasks
- **Module 3: Config UI Basics**
  - Define EPP Build Data Flow
  - Describe the user interface UI
  - List the roles of the EPP participants
  - State the Plant Management Configuration Hierarchy
  - Implement a Track Zone in the UI
  - Demonstrate adding Footprints to the UI
  - Describe the EPP Download process
  - Describe varieties of Tasks and their configuration
  - Describe Multi-footprint tasks
  - Describe Main, Backup, and Alternate Tools
- **Module 4: Config UI Triggers**
  - Define the EPP Dataflow
  - Describe what a trigger does in EPP
  - Explain single and complex triggers
  - List types of triggers
  - Define Trigger Families
- **Module 5: Ethernet Mapping and IO-Link**
  - Review IO-Link Architecture
  - Walk through examples of IO-Link configurations
  - Review EPP Legacy Hardware
  - Review EPP Ethernet I/O Map



- **Module 6:** Hardware
  - Define EPP limitations
  - Introduce Infrastructure template drawings
  - Describe Footprint template drawings
  - Identify EPP Hardware
  - State the SEP to EPP Conversion Information
- **Module 7:** PLC and CDE
  - Describe the logic template for EPP projects
  - Apply CDE for Logic Generation
  - Identify Conveyor Interlocks and PFS Messaging
- **Module 8:** HMI and LTC
  - Describe EPP specific screens
  - Identify how EPP has different use of GCCS-2 standard screens
  - Define LTC configuration in the PLC logic
- **Module 9:** Runtime UI SATs
  - Describe how to Enter and Exit Simulation Mode
  - Define unique screen traits used to identify Simulation mode is active
  - Define SAT Process

### **Student Certification**

**4 Hours**

- Students are required to take a (4) hour certification including questions on Canvas LMS and configure the User Interface upon completion of the class.
- Students may use the EPP Student Manual and any documentation located in the EPP Online course during the test.
- Certification is worth 100 points – 80 points are needed to pass exam.
- This is a pass/fail competency certification – no grade will be given.
- If student passes with 80 points or better, he/she will be considered certified and will be awarded **3.2 (CEU's) Continuing** Education Units, which will apply to your Macomb Community College transcript.
- Student will also be mailed a Certificate.

### **Attendance**

- Due to the hands-on work with the EPP UI environment attendance is mandatory.

### **Duration**

- The class including the Certification exam is expected to take 4 days

### **Student Rights and Responsibilities**

Student online and on-ground behavior must be in accordance with Macomb's Handbook or Rights and Responsibilities <http://www.macomb.edu/NR/rdonlyres/08393098-75E2-4DA0->



[B534-07B76A0E6DC2/0/StudentHandbook.pdf](#) . Academic dishonesty will not be tolerated at Macomb Community College. Dishonesty, through cheating, plagiarism or other dishonest acts defeats the purpose and disgraces the mission and quality of Macomb College.

## **Software Requirement**

### **Operating Systems**

- Windows 10.

### **Windows Browsers:**

- Google Chrome latest version

Disable pop-up blockers when using Canvas

### **Recommended Software:**

- Microsoft Office (Excel, Word, PowerPoint)
- Adobe Acrobat Reader
- RSLogix v20 or higher; Studio v24, v28, or (32 future)

For technical issues such as a password reset, login issues, or compatibility concerns contact Macomb Online Support if you have questions or need assistance with CANVAS: [onlinesupport@macomb.edu](mailto:onlinesupport@macomb.edu) or 1.877.362.2662.