

AUTOMATION ACADEMY

A u t o m a t i o n S y s t e m s T r a i n i n g S p e c i a l i s t s

Course Title: GEM 80 Programming Course Using AGP

The GEM 80 Programming Course has been designed to familiarise Engineers with experience of other PLC systems with the ladder programming and program configuration of GEM 80 systems. It would be suitable for Software Engineers looking to replace legacy GEM 80 equipment with an updated PLC system. It will give them the experience they need to understand the ladder program control function that the GEM 80 is currently providing to allow them to convert this program to a new control system.

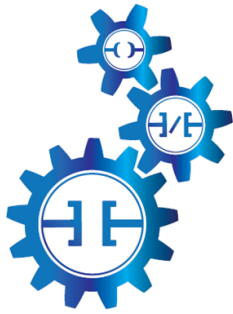
Where possible, application specific exercises, actual drawings and plant programs will be used to allow the students to gain the greatest possible benefit from the course.

Course Objectives:

- ☒ To understand the operation and editing options of the AGP programming software.
- ☒ To understand the use and operation of all of the GEM 80 standard instructions.
- ☒ To be able to read and understand the operation of GEM 80 special functions.
- ☒ To understand and program the most commonly used special function instructions, including Lincon, Limit, Fgen and Conaray.
- ☒ To understand the configuration and operation of the PIDABS, PID special function.
- ☒ To understand the programming techniques commonly utilised on GEM 80 application programs.
- ☒ To be able to use the AGP GEM 80 programming software to produce a complete annotated GEM 80 program.
- ☒ To understand how to configure and use GEM 80 serial communication links.

Course Content:

First steps introducing the operation of the AGP programming software.
Creating a training program to demonstrate the course programming examples.
Getting an online connection from AGP to the GEM 80 controller, serial and/or Ethernet.
Downloading the user program to the GEM 80 controller from AGP.
GEM 80 ladder programming techniques using the standard instructions.
Programming examples including relay, delays, counters, obey blocks, logic, and simple maths.
Understanding the documentation in a GEM 80 Special Function data sheet.
Programming GEM 80 special functions, Lincon, Limit, Fgen and Conaray.



AUTOMATION ACADEMY

A u t o m a t i o n S y s t e m s T r a i n i n g S p e c i a l i s t s

Programming the GEM 80 PIDABS special function and PID control.
GEM 80 programming techniques and tricks.
Using and creating program documentation in AGP.
Understanding the P tables and their importance in a GEM 80 program.
GEM 80 special functions locate and move for P table usage.
GEM 80 serial communications, configuration, and operation.

Customised training included in the course cost.

As part of this training course we will include custom application exercises for your own plant and processes, this value added option creates immediate payback for students on plant. It will have the benefit of the students becoming familiar with key areas of your PLC project(s) during the training course. This option does require the supply of your plant drawing and program listings at least 2 weeks prior to the course start date.

Course Duration: 4 Days

Documentation: GEM 80 AGP Programming Training Manual.

Equipment per student: GEM 80 controller

AGPV4 Programming laptop

Plant simulator

Web link: [GEM 80 Programming Course using AGP](#)