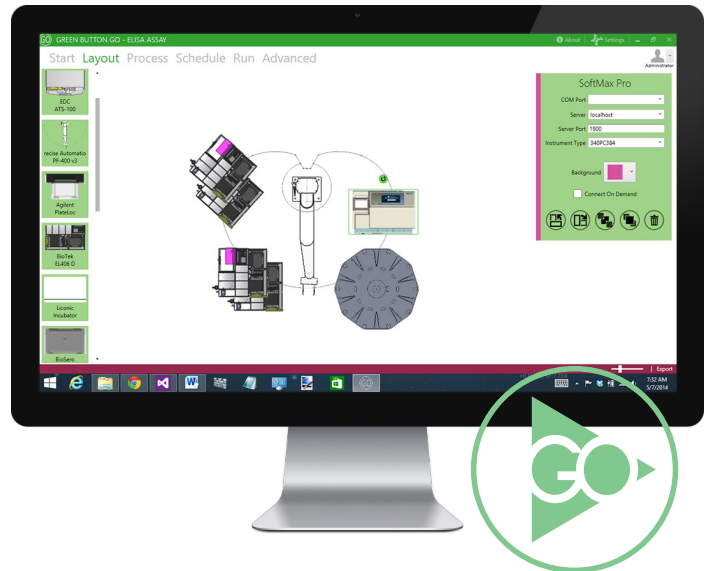


## GREEN BUTTON GO AUTOMATION SCHEDULING SOFTWARE: GBG DEVELOPER TRAINING



### COURSE OVERVIEW

- Driver Development
- Plugin Development
- GBG Architecture and Messaging System
- Remote Interface
- Advanced Scripting

### INTRODUCTION

Biosero offers in-depth, multi-day Green Button Go Automation Scheduling Software (GBG) training courses at our San Diego headquarters. Both advanced and developer level courses run regularly throughout the year, and are designed to elevate your GBG skills to the next level. Courses immerse attendees in the software with hands-on training sessions lead by GBG developers. Classes are limited to a maximum of 10 students. Alternatively, private customized courses can be held at Biosero or your facility. Contact your sales representative if you are interested in learning more about custom GBG training.

### GBG DEVELOPER TRAINING

GBG Developer Training is a 3-day hands-on course that provides the highest level of training for GBG. This course is for users experienced in programming and is led by our internal software developers. Attendees will receive instruction on the development of instrument drivers, plugins, and will take a deep

dive into advanced scripting. Completing this course will allow users to develop and maintain drivers and plugins that will extend or customize the capability of GBG for their unique needs. Biosero provides training materials, but attendees must bring their own laptop for hands-on tutorials. There is easy access to local accommodations for the length of the training.

### WHO SHOULD ATTEND

GBG Developer Training is for anyone who has programming experience and is responsible for deployment, maintenance, and customization of GBG driven automated workflows. Recommended prerequisites are GBG Advanced Training and regular hands on experience with GBG in the laboratory. A working knowledge of the .NET Framework is recommended. All example code will be in C#.

## EXPECTED OUTCOME

On completion of this training, attendees will be empowered with advanced scripting strategies, and be able to develop their own drivers and plugins for GBG. They will also gain valuable insight into the core architecture of GBG and have direct access to the development team.

## PROVIDED BY BIOSERO

- GBG Installation with Simulation License
- Visual Studio Driver Project Template
- SDK Documentation
  1. Driver Development
  2. Plugin Development
  3. Core API Documentation
- Sample Driver Projects
- Sample Plugin Projects
- Example Script Library

## REQUIRED BY ATTENDEES

- PC Laptop running Microsoft Windows 7 or higher
- Hotel and transportation to Biosero facility; Biosero can recommend local accommodations
- Lunch will be provided each day; attendees will be on their own in the evenings



## ADVANCED GBG TRAINING AGENDA

1. Driver Development
  - A. Use of Visual Studio Driver Template
  - B. Building Drivers
    - *Simple Single Nest*
    - *Complex Single Nest*
    - *Multi-Nest*
2. Plugin Development
  - A. Adding Workflow Commands
  - B. Adding Tools and Settings
  - C. Messaging System Hooks
  - D. Runtime Database Interface
  - E. Program Interaction
  - F. Logging System Hooks
  - G. Remote Interface
  - H. Sample Plugins
    - *Customized Error Handling*
    - *GUI Interaction*
    - *Custom Logging*
    - *Text to Speech Plugin*
3. Scripting
  - A. Getting/Setting Variables
  - B. Reading and Writing to Runtime Data Tables
  - C. Script Level Instrument Interface
  - D. Ready Evaluation Scripting
  - E. On Load, On Schedule, Background Scripts
  - F. Common Scripts Scenarios

