

TRAINING COURSES

BY AUSTIN CONSULTANTS



Course level guidelines:

L1 – LabVIEW Beginner Level – From never hearing of LabVIEW to only a few weeks worth of knowledge.

L2 – LabVIEW Intermediate User – Between 1 months and 1 year of experience, approximately or LabVIEW programming.

L3 – LabVIEW Advanced User – Greater than 1 year's worth of LabVIEW experience, approximately.

Our training courses:

1. LabVIEW Beginner: Code in one day – L1

- Learn to code in LabVIEW in one day
- Have a trained instructor guide you from your first program to understanding the functions and benefits acquired from programming in a graphical format rather than text based.
- Learn the speed at which you can program simple items and useful tools in LabVIEW and why it is forever growing in popularity as the programming tool of choice for Engineers.

2. LabVIEW Intermediate Programmer – One day course – L2

- Error handling: Why? We'll show you some practical solutions and demonstrate various ways to do it - CEH, free running modules etc.
- Sharing data between loops: What to use and what not to use! There are multiple methods, reasons why not to use, and we'll take you through some common mistakes.
- Creating a great GUI: Tips and tricks. Also property nodes, graphics, basic animations, Xcontrols etc.
- Building and distributing code: Exe. Installers etc

3. LabVIEW Advanced Programmer – One day course – L3

- Reference basic architecture (DVR)
- Getting better performance out of your code
- Using non-standard installer creation

4. LabVIEW Data Acquisition, Instrumentation, and System Integration – L2

- LabVIEW best practice
- Data acquisition from the PC – Best practice
- Other instrument best practice (RS-232, GPIB, TCP/IP)
- Coding style and why it matters. We will take you through simple tips to make code readable, modular and portable between team members.
- Managing Application configuration (.ini files)
- Managing and reporting data – Introduction to common methods, advantages, disadvantages, speed etc. TDMS, plus report generation from LabVIEW using custom defined .xls files etc

5. LabVIEW Architectures and Templates – One day course – L2

Spend a day learning about the best LabVIEW Architectures to use for the different types of programs you write, therefore saving yourself getting into scalability and flexibility issues further down the line.

- Quick code writing with flexibility
- Producer Consumer Benefits
- Data acquisition structures
- LabVIEW templates
- Advanced templates and frameworks (Discount available on the Austin Consultants Framework with the course)

6. LabVIEW Object Orientation – One day course – L3

This course is split into a morning and afternoon session:

- Morning: Simple breakdown, why use OOP, the benefits, where the action arises from and basic UML.
- Afternoon: Advanced understanding and uses, and a guide to areas where it has been used e.g. the Actor Framework
- Some OO design patterns (factory / command etc.)

7. LabVIEW and The Web – One day course – L2

- Interacting with your applications over the web
- LabVIEW with HTML, Javascript and CSS
- WebServices (GET, PUT, POST, DELETE)
- Datasocket

8. LabVIEW Interfacing with Other Languages – One day course – L2

- C/C++, .NET, Java etc
- Interfacing LabVIEW with other languages (for people using other programming languages especially, or working with non LabVIEW interfacing.
- DLL/prototypes integration, .NET assemblies, ActiveX etc

9. VeriStand – One day course – L2

- Introduction to VeriStand
- Why use VeriStand? What sort of applications does it suit?
- Combining with power of MATLAB – interaction with MATLAB models
- Creating simple LV models
- Alarms, fault insertion, Macro capabilities
- Simple test scripting Stimulus Profile
- Best practice: Introduction to advanced features, customer devices, customer controls etc

10. LabVIEW FPGA and cRIO – One day course – L2

- What is an FPGA and why would you need one? (Custom protocols, speed, RIO architectures, future possibilities)
- LabVIEW FPGA and RUI best practice
- Architectures to setup
- Tips and tricks for FPGA programming

11. LabVIEW FPGA and cRIO Advanced – One day course – L3

- Increase speed and fitting into available space: Pipelining Efficient maths operations, dedicated DSP cores
- Avoid long compiles – advanced testing and simulation before you compile
- Compile servers – running a separate Linux server or Cloud setup

12. Software Engineering Principle – L1

- Software management best practice
- Requirements capture
- Software time estimation techniques
- Source code control with LabVIEW, Mercurial, Subversion and Bitbucket

13. How to pass your Certified LabVIEW Developer exam – Half day course – L2

- Tips and tricks and recommendations as to how to pass your Certified LabVIEW Developer exam, includes an attempt at passing an Austin Consultants training exam and have it marked by a Certified LabVIEW Architect with Feedback.
- Austin Consultants has 8 Engineers who have all at some point passed their Certified LabVIEW Develop exam and have helped multiple others pass their CLD exam with the use of these tried fundamental items to remember and work with.

14. How to pass your Certified LabVIEW Architect exam – Half day course – L3

- Tips, tricks and recommendations as to how to pass your Certified LabVIEW Architect exam. Includes an attempt to pass an Austin Consultants training exam and have it marked by a Certified LabVIEW Architect with feedback and recommendations provided.
- Austin Consultants has five Certified LabVIEW Architects and have helped multiple others pass their CLA exam with the use of these tried and tested tips.