

ECL User Certification Program

ECL's User Certification Program reinforces and expands on our initial user training to ensure that users maximize the value they get from the system and the software. For each level of certification, users are provided a set of lectures that take them through the relevant concepts, tools, and techniques using live examples. Each lecture has a companion problem set designed to solidify the skills covered in the lesson. Instructors review and provide individualized feedback for each of these assignments. Certification is granted to users who satisfactorily complete each assignment in a given level, as well pass a final comprehensive evaluation for the certification level. In addition to lectures and feedback on assignments, ECL staff members are available to all participants for office hours and extra help (both remotely and in person) throughout the program.

Levels of certification cover increasingly advanced and challenging topics and techniques. Each certification level is designed to occupy a week of lectures and assignments, culminating with a comprehensive skills exam. A general overview of the subject matter covered at each certification can be found below:

Level 1: Baseline Safety Certification

Open or Private Session

- Basics of Command Center
- Organizing Laboratory Notebooks
- Using the Experiment Command Builder
- Tracking experiment progress
- Troubleshooting experiments
- Plotting experimental results

Level 2: Advanced ECL Command Center® Certification

Private Session

- Navigating ECL Constellation
- Downloading and uploading data
- Querying the database
- Utilizing function help files
- Assigning variables
- Using experimental templates

Level 3: Advanced Data Analysis Certification

Private Session

- Utilizing Analysis Apps
- Generating Custom Figures and Tables
- Unit handling and analysis
- Introduction to statistical toolset
- Utilizing Physical Simulations
- Introduction to lists and list processing

Level 4: Advanced Scripting Certification

Private Session

- Defining custom functions
- Using conditionals
- Graphics primitives and generating custom plotting functions
- Introductory programming skills
- Basic pattern matching
- Automated report generation

Level 5: Expert Programming Certification

Private Session

- Advanced control flow
- Advanced pattern matching
- Advanced list processing
- Recursive functions
- Cache management
- Test Driven Development (TDD)

Private sessions include training for up to 10 users.