Laboratory Automation Basic Training

Laboratory robotics and automation are routinely used to accelerate research and increase quality beyond human capabilities in high-throughput screening laboratories and other places in many large organizations and institutions. The economics of scale now enable smaller laboratories in biotech start-ups and academic settings to utilize laboratory automation at scales appropriate for their needs and budgets. One barrier to adoption is lack of exposure to these technologies prior to purchase so potential users can better understand liquid handling automation. To fill this need, we have created a full-day training course which familiarizes the scientist with types and uses of laboratory automation, terminology and methods of automated liquid handling, optimal aspirating/dispensing techniques, reagent and chemical compatibility, validation/QC testing, and proper decontamination. The highlight of the training is hardware and software demonstration and hands-on use of actual liquid handling robots. A practical test is given at the end of the course and those who pass are issued a certificate of completion.

Who will benefit?

Scientists interested in hands-on experience with liquid handling robots

Robotic liquid handler technicians

Robot maintenance personnel

QA-QC personnel

Laboratory automation engineers

Laboratory managers

Anyone planning to purchase or use liquid handling equipment

What will you learn?

Master the terminology & methods of automated liquid handling

Practice optimal automated pipetting techniques

Understand reagent & chemical compatibility issues

Become familiar with validation/QC testing techniques & options

Learn proper decontamination techniques

Operate real liquid handling robots with liquids of various viscosities & handling characteristics

Course Overview (Morning session)

Introduction to liquid handling robots

Safety Issues

Liquid handling terminology, issues and techniques

Reagent and chemical compatibility and handling issues

Validation and QC techniques and options

Decontamination protocols

WORKSHOP (Afternoon session)
Hands-on practical with the following robotic liquid handlers:

Beckman Biomek FX
Beckman Biomek 2000
Tecan RSP 200
Hamilton Microlab STAR*
Velocity 11 Bravo*
Gilson 215 (and other models)*
Caliper Zephyr*
Other**

Dispensing liquids of varying viscosities
Dispense height
Dispense speed
Air gaps
Mixing techniques
Liquid-level following
Foaming issues and prevention
Environmental containment
Static electricity problems and solutions
Performance measurement

The instruments used for training having been thoroughly decontaminated. However, to maintain a realistic biological laboratory setting gloves are provided and use is encouraged. Please bring protective lab glasses or goggles. Do not wear ties or dangling jewelry which might get caught in the machines. Pocket protectors are acceptable and encouraged if you have a really cool one.

* Available on request. Please inquire previous to enrolling to schedule a specific robot on this list for a specific training session.
** Training is available on other platforms. Please inquire for a specific model . Additional cost may apply.

Instructors:
Thomas Strader, MS-Biotechnology - President of Heartland Biotech consulting, Labautomation 2010 Scientific Committee member, founder and president emeritus of Midwest LRIG, guest-editor of June 2008 Journal of the Association of Labautomation issue on Automation of Mammalian Cell Culture, former Senior Marketing Manager of Instrumentation at Roche-NimbleGen and Genomics Product Manager at Promega.

Gavin Buehl - Chief Operating Officer at Global Genetechs, instructor of Introduction to Manual Liquid Handling course at BTCI (BioPharmaceutical Technical Center Institute) located on the Promega campus, former Automation Technician at Third Wave Technologies (now Hologic).

Location:
The course is taught in Madison, Wisconsin, typically at the Global Genetechs headquarters and repair shop located at 715 Post Road, Madson, WI (behind Epicentre). Onsite training is available for groups of 6 or more.

Cost:
Tuition is $995 per student. Group rates, academic and government discounts are available.

To enroll: Go to www.heartlandbiotech.com

For more information call 608-770-7649 or email info@heartlandbiotech.com.