

## AUTOMATION TRAINING OBJECTIVES

Following the **Biomek® 2000 Introduction & Safety** lecture the student shall:

1. Recognize Biomek® 2000 component parts.
2. Recall and appropriately use Biomek® 2000 technical vocabulary.
3. Examine the BioWorks Modules.
4. Identify the three parts of a BioWorks Method.
5. Comprehend appropriate uses of each BioWorks Module:
  - a. BioScript
  - b. BioWorks Advisor
  - c. Diagnostics
  - d. Edit
  - e. LabBook Manager
  - f. Readme
  - g. Run
  - h. Workstation Server
  - i. System Configuration
6. Appreciate Biomek® 2000 Safety Features.
7. Determine appropriate Safety practices when operating the Biomek® 2000.

During the **Biomek® 2000 Cleaning & Maintenance** lecture the student shall:

1. Identify appropriate methods to clean and disinfect worksurface and tools.
2. Examine detailed maintenance procedures.
3. Distinguish between workstation alignment and alignment test.
4. Appreciate appropriate Biomek® 2000 maintenance schedules.
5. Compare & contrast multiple error recovery methods.
6. Review troubleshooting tables.

Following the **Biomek® 2000 Run & Exercises** lecture the student shall:

1. Be familiar with Biomek® 2000 Workflow.
2. Examine Run Module window details.
3. Identify how to save and print run module logs.
4. Compare & contrast exception messages.
5. Perform hands-on Bioworks software exercises to gain competence.

During the **Biomek® 2000 Method Programming** lecture the student shall:

1. Examine how to make edits to existing methods.
2. Ascertain how to begin writing a new method.
3. Follow trainer demonstration in writing a new method.
4. Become familiar with Bioworks Edit Module.
5. Navigate through the Function Palette Bar to assign procedures to the method.
6. Explore method validation.

During the **Biomek® 2000 & Promega DNA IQ™ Extraction** exercise the student shall:

1. Develop and demonstrate the ability to setup the worksurface following BioWorks software graphical interface.
2. Appropriately aliquot DNA IQ™ kit components following written procedure.
3. Use new instrument and associated software to perform extraction of FTA blood punches.
4. Observe automated liquid handler operation while reviewing run log.

During the **Biomek® 2000 & Applied Biosystems Quantifiler™ Standard Preparation, Run Plate Preparation & 7500 run** exercises the student shall:

1. Appropriately aliquot Quantifiler components and setup Biomek® worksurface.
2. Comprehend appropriate use of Bioworks Modules to execute run.
3. Become associated with labware, tool & device terminology during run setup.
4. Follow written procedures and use appropriate laboratory techniques to prepare reagents.
5. Properly prepare the 7500 instrument for run.
6. Evaluate 7500 quality metrics and quantification data.
7. Explore the use of MicroSoft Excel macro to prepare 7500 quantification data for the normalization wizard.

During the **Biomek® 2000 Normalization Wizard** exercises the student shall:

1. Utilize the Normalization Wizard program to prepare a method for the Biomek® 2000.
2. Recognize troubleshooting methods when using Norm wizard.
3. Develop and demonstrate the ability to setup the worksurface following BioWorks software graphical interface.
4. Examine the parameters of the wizard for multiple sample scenarios.

During the **Biomek® 2000 & Applied Biosystems Identifiler™ Amplification Setup** exercise the student shall:

1. Develop and demonstrate the ability to setup the worksurface following BioWorks software graphical interface.
2. Appropriately aliquot Identifiler™ kit components following written procedure.
3. Use new instrument and associated software to perform amplification setup.
4. Observe automated liquid handler operation while reviewing run log.

During the **Method Programming Exercises** the student shall:

1. Demonstrate the ability to navigate through BioWorks software.
2. Independently create a BioWorks method with minimal written parameters.
3. Appropriately setup the worksurface following BioWorks software graphical interface.
4. Produce a 96-well plate from the new method.

Gain experience and confidence in their skills and abilities with the software and instrument.