# BSH-102 Bash shell script programming

## Course Description

**Prerequisite:** basic Linux/UNIX knowledge

**Delivery Method:** Instructor-led training (ILT)

**Course Length:** 5 days

## Course Outline

1. **Introduction**
   - What is shell
   - Type of shells
   - Writing shell scripts
2. **Special characters**
   - Special characters in file globbing
   - Special characters as metacharacters
   - Special characters as shell keywords
   - Special characters in regular expressions
   - Quoting
   - Escaping
3. **Variables and parameters**
   - Variable substitution
   - Indirect references
   - Variable names
   - Variable assignment
   - Variable scopes
   - Arrays
   - Positional parameters
   - Exit and Exit Status
4. **Tests**
   - if/then construct
   - Test commands
   - File test operators
   - Other comparison operators
   - Compound comparisons
   - List constructs

5. **Loops and Branches**
   - ● for loops
   - while loops
   - until loops
   - Loop control
   - case/esac
   - select loop

6. **Another look of variables**
   - Numerical constants
   - Operators
   - The double-parentheses construct
   - Internal Variables
   - Typing variables
   - Manipulating Variables
   - Arithmetic expansion

7. **Commands 1**
   - Command substitution
   - Internal commands and Builtins
   - Aliases

8. **Commands 2**
   - External Commands
     - wc, basename, dirname, find, grep, sed, awk
   - Regular Expressions
   - Globbing

9. **Working with I/O**
   - Here documents
   - Here strings
   - I/O redirection

10. **Other topics**
    - Subshells
    - Restricted shells
    - Process substitution
    - Functions
    - Using traps