

Course Contents for ACL Scripting

Note: This course content has been created with reference to the ACL Scripting Reference Version: 14.2 by Galvanize

Week	Section	Topic	Learning Objectives	Activities / Exercises	Expected Output
Week 1	Getting Started	Introduction to Analytics & Scripting Environment	Understand the Analytics interface, navigation, project structure, and script editor basics.	Guided walkthrough of the interface, exploring menus, and opening projects.	Familiarity with the environment and navigation.
	Analytics Scripting Basics	Comments, Data Types, Expressions	Understand how syntax works; write expressions; differentiate data types.	Write simple expressions and computed fields.	Basic script using expressions & comments.
	Computed Fields	Defining Computed Fields	Create computed fields using expressions.	Create fields for date conversions, math, text manipulation.	Computed fields integrated into tables.
	Functions	Introduction to Functions	Understand function syntax and apply common functions.	Practice with TOP 30 functions list.	Script using at least 10 functions.

	Variables	Variables & System Variables	Create, use, and modify script variables; identify system variables.	Create variables in script; track variable values.	Script demonstrating variable use.
	Control Structures	IF, LOOP, GROUPING	Use conditional logic and loops in scripts.	Create repetitive processing scripts.	Functional script using IF/LOOP.
	Import & Export Data	Importing Data (ALL IMPORT COMMANDS + ODBC/database connections)	Import data from Excel, delimited, PDF, layout, XML, SAP, and databases using ODBC/ACCESSDATA.	Hands-on data loading from: Excel, CSV, PDF, SQL database via ODBC.	Successfully imported datasets and export sample data.
	Commands Basics	ACCEPT, ACTIVATE, OPEN, CLOSE, DIRECTORY	Understand basic file/table control commands.	Execute each command and observe behavior.	Script performing table activation and file operations.
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Week 2	Intermediate Scripting	Advanced Import Commands	Use IMPORT MULTIDELIMITED, MULTIEXCEL, SAP, XBRL.	Load complex/multi-sheet files.	Multi-source import operational script.
	Commands	Sort, Summarize, Classify, Group, Append, Merge, Join	Perform data manipulation using major commands.	Build a data workflow: sort → summarize → join.	Full data preparation script.
	Profiling & Verification	PROFILE, VERIFY, STATISTICS, SEQUENCE	Perform data profiling and quality checks.	Run profiling on financial data; identify anomalies.	Profiling report script.
	Sampling & Outlier Detection	SAMPLE, CVSSAMPLE, RANDOM, OUTLIERS	Understand sampling methods, cluster sampling, outlier detection.	Produce statistical samples and anomaly lists.	Sampling scripts + outlier report.
	Machine Learning	PREDICT, TRAIN	Understand built-in ML capabilities.	Build prediction model with small sample.	Simple ML training script.
	Functions Mastery	Top 30 Functions Deep Dive	Apply most-used functions in real workflows.	Create function-based transformations.	Script combining multiple function categories.

	Control Structures II	Complex Loops & User Interaction	Use advanced LOOP, DO SCRIPT, DIALOG commands.	Build an interactive script.	Script prompting user input.
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Week 3	Advanced Analytics	DEFINE Commands	Use DEFINE FIELD, DEFINE VIEW, DEFINE TABLE DB, DEFINE REPORT.	Create and customize layouts and views.	Database-defined table + custom report.
	Data Validation	DUPLICATES, FUZZYDUP, FUZZYJOIN, GAPS	Detect integrity issues and fuzzy matches.	Perform fuzzy matching exercises.	Data quality scripts.
	Reporting Commands	REPORT, DO REPORT, PRINT, HISTOGRAM	Create automated reports and visual tables.	Design a text-based report.	Report script + output file.
	Search & Replace	FIND, LOCATE, REGEXFIND, REGEXREPLACE	Apply regex and search functions.	Regex cleanup exercise.	Script with regex transformations.

	Date & Time Processing	DATE(), TODAY(), CTOD(), CTOT()	Manipulate and convert dates/times.	Convert multiple date formats.	Cleaned date standardization script.
	Financial Functions	PV, FV, RATE, PMT, WORKDAY	Use financial functions in audit analytics.	Build financial calculations table.	Script with financial analytics.
	Error Handling	Scripting Engine Error Codes	Diagnose and fix typical scripting errors.	Debug provided faulty scripts.	Error-free script optimized.

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Week 4	Analytics Automation	Analytic Scripts & Headers	Use ANALYTIC, FILE, TABLE, FIELD, PARAM, RESULT tags.	Build a full analytic script with headers.	Complete analytic with metadata.
	Best Practices	Analytic Development Best Practices	Apply modular scripting, naming standards, error trapping.	Refactor previous scripts.	Cleaner, optimized scripts.
	Python Integration	Running Python Scripts	Call Python from ACL; interact with datasets.	Build small Python utility.	Script combining ACL + Python.

	R Integration	Running R Scripts	Use R for statistical or visualization tasks.	Execute R integration.	R-enhanced analytic workflow.
	Automation with Robots	Commit Scripts to Robots	Upload scripts and related files.	Publish and test script in Robots.	Running analytic in cloud Robots.
	Task Automation	Create a Task & Run Ad-Hoc	Set scheduling and triggers.	Create scheduled automation.	Automated audit job.
	Exporting Results	EXPORT, PUBLISH, SAVE LOG	Export data, logs, and results to dashboards.	Export analytic outputs.	Result files + audit trail.
	Storyboards & Visualization	Build Visualizations & Publish Storyboards	Create charts, dashboards, and stories.	Build executive-level visuals.	Published storyboard.