

	A	B
1	ALTERYX - COURSE OUTLINE	
2		
3	Level Defintion:	
4	L1 & L2 - Basic to Intermediate Minimum Duration: 2 days	
5	L3 or Advanced Concepts Minimum Duration: 1 day	
6		
7	Scope:	
8	This course outline doesn't cover Data Science Tools. It focuses on ETL tasks and Automation.	
9		
10	Methodology:	
11	A series of mini-datasets will be taken to illustrate how to use a new tool. Before vs. After images help set the objectives early on. Then, we take a case study that makes use of multiple tools. There we take bigger / unprocessed datasets to create a workflow.	
12		
13	Learning Path Elements (incl. add-on services*):	
14	a) Customised Pre-Join Prep Online Video Course ~ 60 mins. *	
15	b) Classroom Program	
16	c) Post-Training Exercise Webinar *	
17		
18	A L1 & L2 - Basic to Intermediate	
19		
20	1 INTRODUCTION TO ALTERYX	
21		
22	Understanding the concept using the analogy of "Relay-Race"	
23	Repeatable Workflow in the context of "Specialist Tools"	
24	Demo: What problem does Alteryx solve for heavy Excel users?	
25	Walkthrough of the User Interface (UI) & Understanding essential terminologies:	
26	- Workflow	
27	- Favorites Palette	
28	- Workflow Canvas	
29	- Tool Palettes - Input vs Output Anchor	
30	- Configuration Panel	
31	- Preview Window (Metadata)	
32	- Search Box (Tools)	
33	- Tool Name - Activate Annotation	
34	- Shortcut to Run the Workflow (Ctrl + R)	
35	- Checking Data Input and Output	
36	- Extension: YXMD vs YXMP	
37	Learning Path: From 1st time Alteryx user to an Advanced Alteryx user	
38		
39	2 ESSENTIAL TOOLS OF ALTERYX	
40		
41	IN/OUT - INPUT DATA:	
42	Single Access Point for any data file or connection (Import)	
43	Select a sheet; List of sheet names	
44	Start reading on specified line number	
45	Use wildcard character asterisk for importing multiple files in a folder	
46		
47	IN/OUT - BROWSE:	
48	View data profile information (nulls, uniques, non-nulls) in a visual format	
49	Shortcut: Ctrl Shift B	
50		
51	PREPARATION - SELECT:	
52	Select, deselect, reorder and rename fields	
53	Change field type or size	
54	Assign a description	
55		
56	Theory - Basics of Data Type:	
57	String, Numeric, Date/Time, Boolean; Spatial Objects	
58	Date format as accepted by Alteryx	
59	Impact of Data Types in Alteryx workflows, and the importance of SELECT Tool and Metadata window	
60	How is NULL value treated in Alteryx and its impact in various scenarios	

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61		
62		TRANSFORM - SUMMARIZE:
63		Summarize by grouping, summing, counting, string concatenation
64		
65		PREPARATION - FILTER:
66		Split data in two streams - TRUE & FALSE based on the user defined condition(s)
67		Introduction to Formula Expressions
68		
69		IN/OUT - OUTPUT DATA:
70		Export the output to multiple Excel files (e.g. csv, yxdb) or sheets based on a field's values
71		Related settings - overwrite, append; prefix/suffix
72		
73		PREPARATION - MULTI-ROW FORMULA:
74		Create/Update a single column using an expression that can refer to columns in next and/or prior rows
75		
76		JOIN - UNION
77		Concept: "Stacks" the 2 streams on top of each other ~ Append Query
78		Column Synchronisation: Auto-Config by Name vs Position
79		Column Synchronisation: Manual-Config
80		
81		JOIN - JOIN & UNION
82		Concept: Combine two data streams using common field(s)
83		3 JOIN Types of Alteryx - Left Anti, Inner, Right Anti
84		Importance of JOIN + UNION tool in creating a new join type synthetically - Left Outer
85		
86		Case Study #1 - Multiple tools
87		
88		TRANSFORM - TRANSPOSE
89		Convert Cross-tab data table to a flat file format
90		Similar to Excel Power Query's 'Unpivot Column
91		
92		TRANSFORM - CROSSTAB
93		Similar to Excel Pivot Table
94		
95		JOIN - FIND & REPLACE
96		Basic use case: Similar to Excel's VLOOKUP
97		Advanced use case: Intelligent version of Excel's SUBSTITUTE() function
98		Used to Standardize common misspellings, abbreviations
99		Used to Replace placeholder values with actual values
100		
101		PREPARATION - DATA CLEANSING
102		Replace null values, Remove punctuation
103		Modify capitalization (case change)
104		
105		PARSE - TEXT TO COLUMN
106		Split the text from one field into separate rows (vertical) or columns (horizontal)
107		
108		PREPARATION - FORMULA
109		Create / update columns using one or more expressions to perform calculations and operations
110		Deep-dive in to Formula Expressions
111		
112		Theory - Different methods to convert NULL to non-NULL values
113		
114		PARSE - DATETIME
115		Alteryx uses the ISO format yyyy-mm-dd HH:MM:SS
116		Transform date/time data to and from a variety of formats
117		
118		Case Study #2 - Multiple tools
119		

	A	B
120		PARSE - REGEX (Basics)
121		Regular expressions are also referred as RegEx
122		RegEx are matching patterns with the versatile ability to extract useful pieces of information from strings
123		Replace, Tokenize, Parse, or match data using regular expressions
124		"Steroid" version of Excel's functions such as LEFT, RIGHT, MID, SEARCH, LEN, ISNUMBER, Wildcard characters
125		
126		PREPARATION - MULTI-FIELD FORMULA
127		Similar to the functionality as the FORMULA Tool
128		Advantage: Apply function across multiple fields of data all at once
129		
130		PREPARATION - GENERATE ROWS
131		Create a sequence of numbers, transactions, or dates
132		
133		PREPARATION - UNIQUE
134		Splits the data stream in two sets: Unique records based the selected field(s) and Remaining records
135		
136		PREPARATION - SAMPLE:
137		Limits the data stream to a specified number, percentage, or random set of the rows
138		
139		PREPARATION - SELECT RECORDS:
140		Returns records and ranges of records that are specified, including discontinuous ranges of records
141		
142		DEVELOPER - DYNAMIC RENAME:
143		Use with FORMULA tool to get the correct column headers
144		
145		Case Study #3 - Multiple tools
146		
147		Case Study #4 - Multiple tools
148		
149		Case Study #5 - Multiple tools
150		
151	3	DEMO of selected tools (simple and easy):
152		
153		IN/OUT - TEXT INPUT: Manually add data
154		
155		TRANSFORM - RUNNING TOTAL
156		TRANSFORM - ARRANGE: Manually transpose and rearrange your data
157		TRANSFORM - COUNT RECORDS
158		TRANSFORM - WEIGHTED AVERAGE
159		
160		PREPARATION - RECORD ID: Create unique identifier or serial no. for each row
161		PREPARATION - SORT
162		PREPARATION - RANDOM % SAMPLE
163		PREPARATION - IMPUTATION: Replaces NULLS of a column with median, average etc.
164		PREPARATION - MULT-FIELD BINNING: Group multiple numeric fields into tiles or bins
165		PREPARATION - Tile group in sets to perform clustering analysis
166		PREPARATION - AUTOFIELD: Automatically set the field type for each string field to the smallest possible size
167		
168		JOIN - APPEND FIELDS: Cartesian or cross join
169		- adds every row of the source input to every row of the target input as new columns
170		JOIN - JOIN MULTIPLE: Combine multiple inputs based on record position or common fields
171		JOIN - MAKE GROUP: assembles pairs of matches into groups based on their relationships
172		
173		DOCUMENTATION - TOOL CONTAINER: Enable vs. Disable tools in the Container
174		DOCUMENTATION - COMMENT
175		Essential Shortcuts
176		
177		REPORTING (selected tools such as TABLE, LAYOUT)
178		

	A	B
179	B	L3 or Advanced Concepts
180		
181		PARSE - REGEX (Advanced)
182		Regular expressions are also referred as RegEx
183		RegEx are matching patterns with the versatile ability to extract useful pieces of information from strings
184		Replace, Tokenize, Parse, or match data using regular expressions
185		"Steroid" version of Excel's functions such as LEFT, RIGHT, MID, SEARCH, LEN, ISNUMBER, Wildcard characters
186		
187		JOIN - FUZZY MATCH
188		Identify non-identical duplicates in a data stream
189		Pre-requisite #1: Data Preparation Process using variety of tools such as Data Cleansing, Formula, Multi-field formula etc.
190		Pre-requisite #2: UNION tool to bring data in a single stream since Fuzzy Match has a single data input stream
191		Modes: Purge Mode vs. Merge Mode
192		Match Options - a deep dive:
193		Preprocess
194		Generate Keys
195		Match Functions - Jaro Distance, Levenshtein Distance
196		Word Frequency Statistics
197		Match Threshold & Match Weight
198		
199		INTERFACE - BATCH MACRO
200		Importance of Control Parameter Tool
201		Types: Batch (vs. Standard vs. Iterative)
202		
203		ANALYTIC APP
204		Use an interface to collect user-input which is then used to create custom reports
205		Extension: yxwz file
206		
207		End