

# Spreadsheet Safe

Copyright © 2008 Q-Validus Ltd. All rights reserved. No part of this publication may be reproduced in any form except as permitted by Q-Validus Ltd.



## Spreadsheet Safe

Syllabus Version 1.0

Q-Validus Ltd.

NovaUCD

Belfield Innovation Park

Belfield,

UCD

Dublin 4

Tel. 00 353 1 716 3740

[info@q-validus.com](mailto:info@q-validus.com) / [info@spreadsheetsafe.com](mailto:info@spreadsheetsafe.com)

© Q-Validus Ltd. 2008

## Programme Goals:

**Spreadsheet Safe** is a certificate programme to help spreadsheet end-users and organisations manage and maintain safe spreadsheets. Candidates shall be able to setup, arrange and present their spreadsheets based on standard best practices in spreadsheet design, end-use and control.

**Spreadsheet Safe** Candidates shall achieve well set out, error-free spreadsheets, which show a clear history and ownership path. Candidates shall also be able check their work for input accuracy, breaking down formulas into smaller more auditable parts, as well as making units of measure explicit for ease of update. **Spreadsheet Safe** Candidates shall routinely check their work for calculation and output accuracy, as well creating and validating formulas. Candidates shall also recognize common spreadsheet errors. **Spreadsheet Safe** Candidates shall be able to create charts, and choose the most suitable chart types in order to illustrate data accurately and to enhance meaning. **Spreadsheet Safe** Candidates are required to work in an informed and responsible way, and to appreciate the importance of spreadsheet review, audit and validation. **Spreadsheet Safe** Candidates shall also be aware that spreadsheets may be auditable as part of regulatory requirements. Candidates shall also have due regard to pertinent Health and Safety issues with regard to using computers. **Spreadsheet Safe** helps Candidates demonstrate their skill and awareness in working carefully and productively with spreadsheets.

CATEGORY	SKILL AREA	REF.	MEASURING POINT
1.1 SETUP	1.1.1 Prepare	1.1.1.1	Determine that a spreadsheet application is fit for the proposed purpose.
		1.1.1.2	State the spreadsheet purpose clearly, and indicate any assumptions.
		1.1.1.3	List the spreadsheet requirements. Give the author name, change history, version number.
		1.1.1.4	Set, examine spreadsheet file properties.
		1.1.1.5	Set out any conventions used, such as calculation methods or functions, the meaning of formatting and styles.
		1.1.1.6	Recognise that spreadsheet data formats such as formats for dates, numbers and codes should be explicit, appropriate, and applied consistently.
	1.1.2 Organise	1.1.2.1	Lay out spreadsheet content logically and coherently over a clearly organised worksheet scheme.
		1.1.2.2	Recognise the value of using a summary or index worksheet to help users navigate and understand the organisation of the spreadsheet.
		1.1.2.3	Save, backup and verify distinct spreadsheet versions.
		1.1.2.4	Apply strong password protection to spreadsheets, using mixed case, and non-alphanumeric characters (at least 8) to protect

CATEGORY	SKILL AREA	REF.	MEASURING POINT
			against unauthorised access.
		1.1.2.5	Recognise different macro security levels in spreadsheets and apply appropriately.
<b>1.2 INPUTS</b>	<i>1.2.1 Controls</i>	1.2.1.1	Insert data and replicate across cells.
		1.2.1.2	Place a single instance of a given constant (e.g.: conversion or tax rates) in separate cells.
		1.2.1.3	Break down more complex formulas into smaller component parts to help with readability, comprehension, and for ease of update.
		1.2.1.4	Apply named ranges to make formulas more manageable.
		1.2.1.5	Use manual and automatic calculations.
	<i>1.2.2 Integrity</i>	1.2.2.1	Make units of measure explicit.
		1.2.2.2	Apply the precision as displayed setting.
		1.2.2.3	Import fixed length or delimited text files (e.g. CSV) into a spreadsheet and validate that the data types are correct.
		1.2.2.4	Reconcile the integrity of data from external sources as complete, consistent and correct.
<b>1.3 CALCULATE</b>	<i>1.3.1 Formulas</i>	1.3.1.1	Use mathematical and logical formulas and functions in a spreadsheet.
		1.3.1.2	Correct the order of precedence in mathematical operators in a spreadsheet.
		1.3.1.3	Understand the concept of circular references in a spreadsheet. Recognise and remove circular references.
		1.3.1.4	Recognise array (matrix) formulas in spreadsheets.
		1.3.1.5	Check number and type of function arguments (Lookup function).
		1.3.1.6	Check for and correct relative, absolute and mixed cell references.
		1.3.1.7	Create worksheet, spreadsheet links, and validate that they summarise, update correctly, and are complete.
	<i>1.3.2 Errors</i>	1.3.2.1	Check for missing input values.
		1.3.2.2	Check for and correct missing precedent cells.
		1.3.2.3	Apply ISERROR, ISNA functions.

CATEGORY	SKILL AREA	REF.	MEASURING POINT
		1.3.2.4	Correct #DIV/0! occurrences where appropriate.
		1.3.2.5	Check for and correct #####, #VALUE!, #NAME, #REF!, #NUM!, error values.
	<i>1.3.3 Totals</i>	1.3.3.1	Create cross-totals as a way to validate totalling.
		1.3.3.2	Check for and correct errors in totalling caused by row, column insertion or deletion.
		1.3.3.3	Check for and correct double counted sub-total errors.
		1.3.3.4	Check for and correct mismatched cross-totals.
		1.3.3.5	Check for and correct automatic sum total errors.
<b>1.4 OUTPUT</b>	<i>1.4.1 Data</i>	1.4.1.1	Display information in a worksheet effectively using different formatting.
		1.4.1.2	Show hidden data by changing custom formats (font or background colour), hidden zero values.
		1.4.1.3	Distinguish format decimal commands and round functions.
		1.4.1.4	Apply format decimal commands, round functions.
		1.4.1.5	Export data as CSV, tab or other file format, and validate as correct.
		1.4.1.6	Print and proof spreadsheet outputs.
	<i>1.4.2 Charts</i>	1.4.2.1	Create a chart based on source data.
		1.4.2.2	Switch between different chart types.
		1.4.2.3	Change the orientation of a chart so that all data series are visible.
		1.4.2.4	Apply appropriate chart axes, orientation, scales, titles and annotation to enhance chart meaning.
		1.4.2.5	Express data in a chart meaningfully by choosing an appropriate chart type.
<b>1.5 AUDIT</b>	<i>1.5.1 Review</i>	1.5.1.1	Understand how spreadsheet criticality, risk and potential business impact determine the extent of review and control requirements.
		1.5.1.2	Submit the spreadsheet for independent review, approval before circulation.
		1.5.1.3	Recognise the need for periodic re-review.
		1.5.1.4	Run and validate test cases, with typical, and extreme values, for all calculations.

CATEGORY	SKILL AREA	REF.	MEASURING POINT
		1.5.1.5	Check calculation outputs by using alternate calculation methods.
		1.5.1.6	Un-hide rows, columns, and worksheets.
		1.5.1.7	Un-hide formulas.
		1.5.1.8	Inspect all formulas for logic and output accuracy.
		1.5.1.9	Recognise the presence of advanced features in a spreadsheet such as macros and pivot tables.
	<i>1.5.2 Validation</i>	1.5.2.1	Use IF function to test for cell values being within expected ranges.
		1.5.2.2	Review for data type mis-entry (e.g. text entry for numeric characters.)
		1.5.2.3	Apply conditional formatting to highlight errors.
		1.5.2.4	Apply validation criteria: values, whole numbers, and decimals.
		1.5.2.5	Apply validation criteria: date, time, character lengths.
		1.5.2.6	Apply custom validation criteria.
	<i>1.5.3 Laws &amp; Guidelines</i>	1.5.3.1	Be aware of data protection legislation or conventions in your country.
		1.5.3.2	Be aware that spreadsheets may need to be controlled as part of employer or regulatory requirements.
		1.5.3.3	Recognise that spreadsheets may be controlled records and subject to archive requirements in legislation.
		1.5.3.4	Recognise the significance of disability / equality legislation in helping to provide all users with access to information.