



**cetb**

Bord Oideachais agus  
Oiliúna Chorcaí

*Cork Education and  
Training Board*

**Cork Education and Training Board**

**Programme Module for  
Spreadsheet Methods**

**leading to**

**Level 4 FETAC**

**Spreadsheet Methods 4N1120**

### Introduction

This programme module may be delivered as a standalone module leading to certification in a FETAC minor award. It may also be delivered as part of an overall validated programme leading to a Level 4 FETAC Certificate.

The teacher/tutor should familiarise themselves with the information contained in Cork Education and Training Board's programme descriptor for the relevant validated programme prior to delivering this programme module.

The programme module is structured as follows:

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| 1. Title of Programme Module   |
| 2. FETAC Component Title and Code  |
| 3. Duration in hours   |
| 4. Credit Value of FETAC Component   |
| 5. Status  |
| 6. Special Requirements  |
| 7. Aim of the Programme Module   |
| 8. Objectives of the Programme Module  |
| 9. Learning Outcomes   |
| 10. Indicative Content   |
| 11. Assessment <ul style="list-style-type: none"><li>a. Assessment Technique(s)</li><li>b. Mapping of Learning Outcomes to Assessment Technique(s)</li><li>c. Guidelines for Assessment Activities</li></ul> |
| 12. Grading  |
| 13. Learner Marking Sheet(s), including Assessment Criteria  |

### Integrated Delivery and Assessment

The teacher/tutor is encouraged to integrate the delivery of content where an overlap between content of this programme module and one or more other programme modules is identified. This programme module will facilitate the learner to develop language, literacy and numeracy skills relevant to the themes and content of the module.

Likewise the teacher/tutor is encouraged to integrate assessment where there is an opportunity to facilitate a learner to produce one piece of assessment evidence which demonstrates the learning outcomes from more than one programme module. The integration of the delivery and assessment of level 4 Communications and level 4 Mathematics modules with that of other level 4 modules is specifically encouraged.

Structured communication and teamwork is encouraged between the teacher/tutor delivering this programme module and the language, literacy, numeracy and learning support teacher/tutor, as appropriate, to facilitate the learner in completing the programme module and achieving certification in the award.

**Indicative Content**

The indicative content in Section 10 does not cover all teaching possibilities. The teacher/tutor is encouraged to be creative in devising and implementing other approaches, as appropriate. The use of examples is there to provide suggestions. The teacher/tutor is free to use other examples, as appropriate. The indicative content ensures all learning outcomes are addressed but it may not follow the same sequence as that in which the learning outcomes are listed in Section 9. It is the teacher's/tutor's responsibility to ensure that all learning outcomes are included in the delivery of this programme module.

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| <b>1. Title of Programme Module</b><br>Spreadsheet Methods   |
| <b>2. Component Name and Code</b><br>Spreadsheet Methods 4N1120  |
| <b>3. Duration in Hours</b><br>100 Hours (typical learner effort, to include both directed and self directed learning)   |
| <b>4. Credit Value</b><br>10 Credits   |
| <b>5. Status</b><br>This programme module may be compulsory or optional within the context of the validated programme. Please refer to the relevant programme descriptor, Section 9 Programme Structure  |
| <b>6. Special Requirements</b><br>None   |
| <b>7. Aim of the Programme Module</b><br>This programme module aims to ensure that the learner is equipped with the knowledge, skill and competence required to create, use and edit a spreadsheet application under supervision.  |
| <b>8. Objectives of the Programme Module</b> <ul style="list-style-type: none"><li>• To explore with the learner the purpose of spreadsheets and the processes involved in creating spreadsheet documents.</li><li>• To facilitate the learner to create and make modifications to spreadsheet documents.</li><li>• To enable the learner to use spreadsheet functions and formulae for calculations.</li><li>• To enable the learner to use a variety of commands to display data attractively.</li><li>• To assist the learner to develop the language, literacy and numeracy skills related to Spreadsheet Methods through the medium of the module themes and content</li><li>• To enable the learner to take responsibility for his/her own learning.</li></ul> |

**9. Learning Outcomes of Level 4 Spreadsheet Methods 4N1120**

Learners will be able to:

1. Outline typical spreadsheet functions including document creation
2. State the primary functions and processes involved in creating a spreadsheet document
3. Use the language associated with spreadsheet applications
4. Use with confidence a spreadsheet application to enter and edit text, numbers and dates, and insert and delete columns and rows
5. Use arithmetic operators to add, subtract, multiply and divide
6. Use formulae and functions within a spreadsheet including sum, average, max, min and count
7. Use a range of formatting commands including font size, font colour, background colours, bold, alignments, borders, numbers, decimals and dates
8. Modify a spreadsheet document by adding repeating column or row titles, page numbers, date or text to headers and footers, and adjusting to fit on to one page
9. Produce a range of basic charts and graphs including pie, column, bar and line with titles and labels

## 10. Indicative Content

This section provides suggestions for programme content but is not intended to be prescriptive. The programme module can be delivered through classroom based learning activities, group discussions, one-to-one tutorials, field trips, case studies, role play and other suitable activities, as appropriate.

### Section 1 : Spreadsheet Concepts

#### To enable the learner to outline the purpose of spreadsheets, to include:

- Identifying applications suitable for a spreadsheets, for example, budgets, cash flow statements, travel expenses
- Stating the main reasons for using spreadsheets compared to other systems
- Defining spreadsheet terms, for example, spreadsheet, label, value, formula, function
- Identifying the component parts of a workbook, to include: worksheet, column, row, cell, formula bar, name box

#### To assist the learner to use the language associated with spreadsheet applications, for example:

- Cash flow, income, expenditure, profit, loss, VAT, net, gross, subtotal
- Functions – sum, average, min, max, count
- Formulae – for example, =cell reference 1+cell reference 2
- Arithmetic operators – addition (+) subtraction (-), multiplication (x), division (/)
- Spreadsheet features – for example, worksheet tab, cell range, fill handle, format cells
- Charts – for example, data range, title, location, x-axis and y-axis labels
- Chart types – pie, column, bar and line charts
- Page layout features – for example, header, footer, borders, gridlines, row and column identifiers

#### To enable the learner to state the primary functions and processes involved in creating a spreadsheet document, to include:

- Importance of storage and backup
- Stating that cells are referred to by their grid reference
- Stating that formulae are equations to perform calculations and the structure of formula, for example, =cell reference 1+cell reference 2
- Stating that functions are used to simplify and shorten formulae and the structure of functions, for example, =SUM(cell range)
- Importance of relative cell referencing
- Stating the importance of consistency in formulae/functions that are replicated over a range of cells
- Naming data formatting types, for example, general, number, currency, date, time and percentage
- The importance of accurately inputting data

- The purpose of sorting data

### Section 2: Spreadsheet Creation

**To enable the learner to use a spreadsheet application with confidence, to include:**

- Accessing a spreadsheet application using proper procedures
- Exiting a spreadsheet application using proper procedures
- Opening and closing a spreadsheet document
- Saving a spreadsheet
- Setting up a spreadsheet and entering text, numbers and dates
- Adjusting column width and row height
- Selecting a cell/cell range
- Generating formulae using cell references
- Generating formulae using the arithmetic operators add, subtract, multiply and divide
- Using functions including sum, average, max, min and count
- Replicating/copying formulae and functions over a range of cells using relative cell referencing
- Recognising good practice in entering formulae, functions and the necessity to amend formulae when error codes are returned, for example, #####, #N/A, #Value!, #Name?, #DIV/0!, #REF!
- Switching between worksheets within a workbook
- Formatting data entries, for example, date with the correct format/type, number with the correct decimal places set, currency and percentage data with correct symbols and decimal places
- Using a range of formatting commands in a spreadsheet:
  - Aligning text within cells, for example, left, right, centre
  - Changing the font, font size and colour of cell contents
  - Emphasising text using bold
  - Changing the background colour of cells
  - Applying borders to cells/cell range, for example, line style and colours, a range of border styles outside borders, all borders
- Sorting a spreadsheet on a selected key

### Section 3: Spreadsheet Modifications

**To enable the learner to carry out a range editing tasks:**

- Editing data in cells including, text, numbers and dates

- Deleting cell contents
- Moving/copying cell content with a worksheet
- Inserting and deleting columns and rows

**To enable the learner to carry out a range of page layout and printing tasks:**

- Changing the page orientation to landscape/portrait
- Applying automatic titles in specified rows or columns to repeat on each page of a multi-page document
- Applying a setting to automatically print a multi-page document on one page
- Inserting page numbers, dates and text into header or footer
- Turning on the display of gridlines, row and column headings
- Printing specified number of copies of a worksheet

**To enable the learner to produce basic charts and graphs:**

- Selecting an appropriate data range for a chart
- Selecting an appropriate chart type to include: pie, column, bar and line charts
- Inserting an appropriate chart title
- Ensuring that charts display appropriate category X and Y labels
- Positioning chart as an object in a worksheet and resize a chart
- Selecting the location of a chart in a spreadsheet either within a worksheet or as a separate sheet

**11. Assessment****11a. Assessment Techniques**

Examination - Theory 20%

Examination - Practical 80%

**11b. Mapping of Learning Outcomes to Assessment Techniques**

In order to ensure that the learner is facilitated to demonstrate the achievement of all learning outcomes from the component specification; each learning outcome is mapped to an assessment technique(s). This mapping should not restrict an assessor from taking an integrated approach to assessment.

| <b>Learning Outcome</b>   | <b>Assessment Technique</b> |
|---|-----------------------------|
| 1. Outline typical spreadsheet functions including document creation  | Examination - Theory        |
| 2. State the primary functions and processes involved in creating a spreadsheet document  | Examination - Theory        |
| 3. Use the language associated with spreadsheet applications  | Examination - Theory        |
| 4. Use with confidence a spreadsheet application to enter and edit text, numbers and dates, and insert and delete columns and rows                                | Examination - Practical     |
| 5. Use arithmetic operators to add, subtract, multiply and divide   | Examination – Practical     |
| 6. Use formulae and functions within a spreadsheet including sum, average, max, min and count   | Examination – Practical     |
| 7. Use a range of formatting commands including font size, font colour, background colours, bold, alignments, borders, numbers, decimals and dates                | Examination – Practical     |
| 8. Modify a spreadsheet document by adding repeating column or row titles, page numbers, date or text to headers and footers, and adjusting to fit on to one page | Examination – Practical     |
| 9. Produce a range of basic charts and graphs including pie, column, bar and line with titles and labels  | Examination – Practical     |

**11c. Guidelines for Assessment Activities**

The assessor is required to devise examination papers, marking schemes and outline solutions for the examinations. In devising examination papers care should be taken to ensure that the learner is given the opportunity to show evidence of achievement of ALL the learning outcomes.

Assessment briefs may be designed to allow the learner to make use of a wide range of media in presenting assessment evidence, as appropriate. Quality assured procedures must be in place to ensure the reliability of learner evidence.

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|--|------------|
| <b>Examination - Theory</b>  | <b>20%</b> |
| The theory examination shall be 30 minutes duration  |            |
| <p>Please refer to Section 1 of the indicative content when devising theory examination papers. Learners shall answer 10 short answer questions. The assessor must ensure that the learning outcomes below are covered in the theory examination:</p> <ol style="list-style-type: none"> <li>1. Outline typical spreadsheet functions including document creation</li> <li>2. State the primary functions and processes involved in creating a spreadsheet document</li> <li>3. Use the language associated with spreadsheet applications</li> </ol> <p>Evidence for this assessment technique may take the form of written, oral, audio or digital evidence, or any combination of these. Any audio, video or digital evidence must be provided in a suitable format.</p> <p>All instructions for the learner must be clearly outlined in an examination paper.</p> |            |

|  |            |
|--|------------|
| <b>Examination - Practical</b>   | <b>80%</b> |
| The practical examination shall be 2 hours duration  |            |
| <p>Please refer to Sections 2 and 3 of the indicative content when devising practical examination papers. The learner will undertake a practical examination in two parts to provide evidence of the following:</p> <p><b>PART A – CREATE FILE</b></p> <p><b>Spreadsheet creation</b></p> <ul style="list-style-type: none"> <li>• Save a spreadsheet</li> <li>• Enter data with a minimum of 8 rows and 5 columns to include at least 3 of the following data types: text, date, numeric, currency, percentage</li> <li>• Spreadsheet data to be clearly visible</li> </ul> <p><b>Formulae and functions</b></p> <ul style="list-style-type: none"> <li>• The use of four formulae with the arithmetic operators: +, -, *, / (NB: a minimum of one arithmetic operator per formula. All four arithmetic operators must be used at least once)</li> <li>• The use of five functions to include: SUM, AVERAGE, MIN, MAX, COUNT</li> </ul> <p><b>Replicate formulae/functions</b></p> <ul style="list-style-type: none"> <li>• At least one formula and one function to be replicated</li> </ul> |            |

**Format data**

- Text, date, numeric, currency, percentage data types to be formatted with the correct symbols and/or decimal places

**Format cells**

- At least two different cell alignments
- Apply font, font size, font colour and emboldening of text
- Change background colour of cell(s)
- Application of cell borders

**Organise**

- All or part of the spreadsheet sorted either ascending or descending

**PART B – RECALL FILE**

The teacher/tutor shall prepare a spreadsheet file for the learner to recall. The recalled spreadsheet should have row/column titles inserted and sufficient rows/columns of data to allow printing on multiple pages. It should also be suitable to allow adjustment to fit on page for printing purposes.

**Modifying a spreadsheet**

- Recall an existing spreadsheet
- Modify cell contents
- Insert and delete row(s)
- Insert and delete column(s)
- Print the spreadsheet with repeating column or row titles, page numbers and the date or text in the header or footer
- Apply a setting to automatically print a multi-page spreadsheet to fit on one page

**Chart**

- Select data range for a chart
- Select an appropriate chart type: pie, columns, bar or line
- Insert an appropriate chart title, category X and Y labels
- Select chart location within a workbook

**Save changes to recalled file**

Evidence for this assessment technique shall take the form of digital evidence. Any audio, video or digital evidence must be provided in a suitable format.

All instructions for the learner must be clearly outlined in an examination paper.

**12. Grading**

|               |            |
|---------------|------------|
| Distinction:  | 80% - 100% |
| Merit:        | 65% - 79%  |
| Pass:         | 50% - 64%  |
| Unsuccessful: | 0% - 49%   |

At levels 4, 5 and 6 major and minor awards will be graded. The grade achieved for the major award will be determined by the grades achieved in the minor awards.



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|---------------------------------------|--|
| <b>Spreadsheet Methods<br/>4N1120</b> | <b>Learner Marking Sheet<br/>Examination – Practical<br/>80%</b> |
|---------------------------------------|--|

Learner's Name: \_\_\_\_\_

Learner's PPSN: \_\_\_\_\_

| <b>Assessment Criteria</b>  | <b>Maximum Mark</b> | <b>Learner Mark</b> |
|---|---------------------|---------------------|
| <b>PART A – CREATE FILE</b>   |                     |                     |
| <b>Create spreadsheet</b> <ul style="list-style-type: none"> <li>• Spreadsheet saved as instructed (1 mark)</li> <li>• Spreadsheet data accurately entered with a minimum of 8 rows and 5 columns to include at least 3 of the following data types: text, date, numeric, currency, percentage (8 marks)<br/><i>deduct 0.5 mark per keystroke error to a maximum of 5</i></li> <li>• All data clearly visible (1 mark)</li> </ul> | 10                  |                     |
| <b>Correct use of formulae/functions using relative cell referencing</b> <ul style="list-style-type: none"> <li>• 4 formulae with +, -, *, / operators (1 mark each)</li> <li>• 5 functions <ul style="list-style-type: none"> <li>SUM (2 marks)</li> <li>AVERAGE (2 marks)</li> <li>MIN (2 marks)</li> <li>MAX (2 marks)</li> <li>COUNT (2 marks)</li> </ul> </li> </ul>   | 14                  |                     |
| <b>Replicate formulae/functions</b> <ul style="list-style-type: none"> <li>• 5 marks divided between the number of replications for each question</li> </ul>  | 5                   |                     |
| <b>Format data</b> <ul style="list-style-type: none"> <li>• Data accurately formatted for each question: (10 marks to be divided) <ul style="list-style-type: none"> <li>○ Dates should have the correct format/type</li> <li>○ Numeric data should have the correct number of decimal places</li> <li>○ Currency and percentage data should have the correct symbol and decimal places</li> </ul> </li> </ul>                    | 10                  |                     |
| <b>Format cells</b> <ul style="list-style-type: none"> <li>• Correct alignment of data – at least two different alignments (2 marks)</li> <li>• Correct font, font size, font colour, boldening of text applied (4 marks)</li> <li>• Correct cell background colour applied (2 marks)</li> <li>• Correct cell borders applied (2 marks)</li> </ul>  | 10                  |                     |
| <b>Organise</b> <ul style="list-style-type: none"> <li>• All or part of the spreadsheet accurately sorted</li> </ul>  | 5                   |                     |

| Assessment Criteria   | Maximum Mark | Learner Mark |
|---|--------------|--------------|
| <b>PART B – RECALL FILE</b>   |              |              |
| <b>Modifications</b> <ul style="list-style-type: none"> <li>• Correct spreadsheet recalled (1 mark)</li> <li>• Cell contents accurately modified (2 marks)<br/><i>A minimum of 4 changes – 0.5 per modification</i></li> <li>• Row(s) accurately deleted (1 mark)</li> <li>• Column(s) accurately deleted (1 mark)</li> <li>• Row(s) accurately inserted (1 mark)</li> <li>• Column(s) accurately inserted (1 mark)</li> <li>• Required printout(s) accurately produced: <ul style="list-style-type: none"> <li>○ At least one printout with: <ul style="list-style-type: none"> <li>▪ Repeating column or row titles (2 marks)</li> <li>▪ Page numbers in the header or footer (2 marks)</li> <li>▪ Date inserted in the header or footer (1 mark)</li> <li>▪ Text inserted in the header or footer (1 mark)</li> </ul> </li> <li>○ At least one printout with: <ul style="list-style-type: none"> <li>▪ Data on a multi-page document set to automatically fit on one page (2 marks)</li> </ul> </li> </ul> </li> </ul> | 15           |              |
| <b>Chart</b> <ul style="list-style-type: none"> <li>• Correct data range (2 marks)</li> <li>• Appropriate chart type (2 marks)</li> <li>• Appropriate chart title (2 marks)</li> <li>• Correct category X and Y labels (2 marks)</li> <li>• Correct chart location (2 marks)</li> </ul>   | 10           |              |
| <b>Save changes to recalled file</b>  | 1            |              |
| <b>Total Mark</b>   | 80           |              |

This is to state that the evidence presented in the attached portfolio is complete and is the work of the named learner.

Assessor's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

External Authenticator's Signature: \_\_\_\_\_

Date: \_\_\_\_\_