

**Module Title : Course 50449-13 : Useful Formulas & Functions**  
**Duration : 1 day**

## Course Description

This 1 day course provides students with the knowledge and skills to the usage of useful formulas and functions in Microsoft Excel.

## Audience

This course is intended for users of Microsoft Office Excel who want to learn about useful formulas and functions.

## Prerequisites

Before attending this course, students should have experience:

- A basic working knowledge of Microsoft Office Excel.

## At Course Completion

After completing this course, you will be able to:

- Apply Formula and Functions Basic
- Statistical and Logical Functions
- Lookup and Reference Formulas
- Text Formulas
- Date and Time Formulas
- Array and Database Functions
- Efficiency Tips

## Course Outline

### Module 1: Making Data Work For You

This module explains how to understand and apply Excel basic formulas and functions.

#### Lessons

- Formula basics
- Using cell references
- Copy formula without changing cell reference
- Transpose formula
- Using nested functions

After completing this module, students will be able to:

- Understand and apply formula basics
- Using cell references
- Copying formula without changing cell reference
- Transpose formula using paste special
- Using nested functions

### **Module 2: Statistical and Logical Functions**

This module explains how to use logical functions including CountIf, Sumif, If, IsError.

#### **Lessons**

- Perform calculation using CountIF
- Perform calculation using SumIF
- Perform calculation using AverageA
- Using IF function to prevent division by zero
- Using IsError function to avoid error display
- Creating multiple conditions using nested IF
- Using logical function OR, And

After completing this module, students will be able to:

- Perform calculation using CountIf, SumIf, AverageA
- Using If function to prevent division by zero
- Using IsError function to avoid error display
- Create multiple conditions using nested IF
- Using logical function OR, AND

### **Module 3: Lookup and Reference Formulas**

This module explains how to apply and use lookup formulas including vlookup, hlookup, match and index.

#### **Lessons**

- Using Vlookup to find specific data
- Using Hlookup to find values in rows
- Using Match and Index to retrieve data

After completing this module, students will be able to:

- Using Vlookup to find specific data
- Using Hlookup to find values in rows
- Using Match and Index to retrieve data

#### Module 4: Text Formulas

This module explains how to apply Text formula to help change casing of text, append text and numerical value in excel spreadsheet.

##### Lessons

- Changing case of text
- Append text and numerical value
- Convert imported text format into numbers
- Break imported date field into individual columns

After completing this module, students will be able to:

- Changing case of text using Upper, Lower or Proper formula
- Append text and numerical value
- Convert imported text format into numbers
- Break imported date field into individual columns

#### Module 5: Date and Time Formulas

This module explains how to make use of calculate the difference of two given Date fields and to perform calculation with Time fields.

##### Lessons

- Perform addition to Date fields
- Calculate difference between two Dates
- Perform calculations with Time fields

After completing this module, students will be able to:

- Perform addition and calculate difference between two dates
- Perform calculations with Time fields

#### Module 6: Array and Database Functions

This module explains how to apply and use advance formula including Array, Frequency and Database functions.

##### Lessons

- Using Array Formulas
- Calculate the difference between Maximum and Minimum values
- Using Frequency function to Count responses
- Using Database functions DSum and DCount

After completing this module, students will be able to:

- Using Array Formulas
- Calculating the difference between Maximum and Minimum values in an Array
- Using Frequency function to Count responses in tabulated data
- Using Database functions DSum and DCount

### Module 7: Efficiency Tips

This module discusses some useful Excel Tips including application of Data Validations and Auditing Tools.

#### Lessons

- Shortening worksheets names
- Protecting cells containing formulas
- Using Data Validation
- Displaying Formula syntax
- Using Auditing Tools for errors checking
- Tracing precedent and dependent
- Adding comments to worksheet

After completing this module, students will be able to:

- Understand the advantages of shortening worksheet names
- Protecting cells from amendments by others
- Using Data validation to improve data entries
- Using Auditing Tools for checking errors
- Adding useful notes by commenting worksheet