

Excel concepts covered in MIS 2003, MIS 3003, and MIS 4173

Below are the Management Information System (MIS) course numbers followed by the name of the course and instructor. These are followed by lists of the Excel concepts covered in that course.

MIS 2003

IT Concepts for Business taught by John Vowell

- Creating worksheets
- Formatting worksheets
- Formatting data
- Importing / Exporting data
- Creating and embedding various types of charts
- Analyzing data with charts
- Analyzing data with formulas
- Analyzing data with functions
- Conditional formatting
- Relative and absolute cell referencing
- What If Analysis
- Sorting and filtering data
- Working with large worksheets
- Multiple worksheet referencing
- Data tables

MIS 3003

Management Information Systems taught by Jesse Luo

- Enter different types of data.
- Basic formatting.
- Basic functions, e.g., sum, average, using numbers within the same spreadsheet or across different spreadsheets.
- Use formulas, e.g., b3-c3, b3/c3.
- Copy a whole spreadsheet.
- Create pivot tables and use them to answer business questions.
- Absolute Reference and 3D reference
- RANDOM function for data simulation
- Note: The Excel features are covered in MIS context. Take the pivot table as an example, the data are work order ticket data from an IT department. The data include work order number, creation and closing date, systems issues reported, reporting employees, and assigned technicians, etc. Students need to create a

pivot table to summarize relevant data and draw conclusions on technician performance evaluation.

MIS 3003

Management Information Systems taught by Jie Zhang

- Use different types of data, including numbers and text.
- Create pivot tables and use them to answer business questions.
- Use basic functions, e.g., sum() across multiple spreadsheets.
- Use formulas, e.g., b3-c3, b3/c3.
- Visualization: line chart, pie chart, sparklines, data bars, and clustered column chart.
- Introduce the concepts of absolute reference, relative reference, and name range.
- Use additional functions, e.g., datedif(), sumif(), countif(), pmt(), vlookup(), etc. to enforce student understanding of syntax in Excel functions.
- Introduce descriptive statistics using Excel Data Analysis tools.
- Introduce regression using Excel Data Analysis tools.
- Introduce students to the Help feature within Excel.

MIS 4173

Advanced Excel taught by Jesse Luo

- Define and use range names.
- Lock the reference to a range using absolute referencing.
- Reference to a range on another worksheet using 3D reference.
- Identify the type of value using information functions.
- Identify the type of error returned by a formula.
- Control complicated logic flow using nested logic functions.
- Use shortcuts for the above operations if applicable.
- Use text functions to format excel text cells: UPPER, LOWER, PROPER, EXACT, CONCATENATE, LEFT, RIGHT, MID, LEN, TRIM.
- Use FIND and SEARCH function.
- Use date function like: DATE, WORKDAY, NETWORKDAYS, NOW, TODAY.
- Calculate the count, summation, and average of the records that satisfy certain criteria: COUNTIF, COUNTIFS, AVERAGEIF(S), SUMIF(S), SUMPRODUCT.
- Use LOOKUP functions to find cells with approximate match
- Use LOOKUP functions to find cells with exact match
- Use MATCH function to find the location of a cell in an array
- Use INDEX function to find a cell based on row index and column index
- Use INDIRECT and OFFSET functions.
- Use Goal Seek to check the change in assumptions by changing the outcome
- Use Scenario Manager to manager different assumption for different scenarios

- Use one-way Data Table to calculate outcomes by varying one assumption
- Use two-way Data Table to calculate outcomes by varying two assumptions
- Create one-way and two-way tables using PivotTable
- Group items for a field
- Create calculated fields and items
- Update a PivotTable after changing data source
- Generate PivotChart for multiple fields
- Insert Slicer for multiple PivotCharts
- Basic Statistic Functions: LARGE, SMALL, COMBIN, PERMUT, FREQUENCY, CORREL, COVAR, KURT, SKEW, and etc.
- Analysis Toolpak.
- Calculate time value of money using functions such as PMT, PV, FV, CUMIPMT, CUMPRINC
- Calculate net present value and internal rate of return for a series of future cash flows
- Import data from Access to Excel
- Import data from a webpage to Excel
- Import data from a text file to Excel
- Selectively import data from a relational database to Excel using Microsoft Query
- Parse text data into columns
- Automate simple routines using macro
- Assign a macro to a shape
- Modify the VBA code of a macro