Excel advanced

Lecturer: Federica Valsecchi

Language

English

Course description and objectives

The course is aimed to analyze the main advanced features of Excel, including complex functions, what-if analysis, pivot tables and macros, with specific examples and exercises that can be immediately applied to one's study and work. The goal is to improve the advanced skills in basic Excel users, in order to give them the tools for an effective and qualified approach to both academic and professional activities.

Attention: The contents of this course largely follow what is covered in the curricular courses of Computer Science, Computer Skills and Computer Skills for Economics.
The course is also valuable as preparation for the ICDL Advanced Spreadsheet certification.

At the end of the course participants will be able to:

- Effectively organize data into a spreadsheet
- Analyze data using complex functions and tools
- Manage external data into Excel
- Manage Excel charts in an advanced manner
- Apply advanced formatting to the worksheet

Audience

The course is open to all Bocconi students. In particular, it is targeted at:

- Undergraduate students who have successfully passed Computer science, Computer skills or Computer skills for economics exam, and who aim to review and improve their skills and get the ICDL Advanced Spreadsheet (Excel) certification
- Undergraduate students who have passed with some difficulty Computer science, Computer skills or Computer skills for economics exam, and who want to become nimbler using Excel's advanced features
- Graduate students who have not attended their undergraduate studies at Bocconi and thus have not taken Computer science, Computer skills or Computer skills for economics exam
- All those who need to manage and process data in a professional manner for their academic or professional activities

Prerequisites

To have achieved the ICDL standard certification (or ECDL Core/New ECDL) or have equivalent skills. In particular, it is required to know:

- How to enter data in Excel
- How to manage worksheets
- How to build simple functions
- How to create charts
- How to format data

Duration

20 hours

Teaching mode

This course will be only taught in person. Distance mode will not be provided.

Calendar

Lecture	Date	Time	Room
1	Fri 28/10/2022	14.45 – 16.15	N30
2	Fri 28/10/2022	16.30 – 18.00	N30
3	Fri 04/11/2022	14.45 – 16.15	N30
4	Fri 04/11/2022	16.30 – 18.00	N30
5	Fri 11/11/2022	14.45 – 16.15	N30
6	Fri 11/11/2022	16.30 – 18.00	N30
7	Fri 18/11/2022	14.45 – 16.15	N34
8	Wed 23/11/2022	18.15 – 19.45	N34
9	Wed 30/11/2022	18.15 – 19.45	N34
10	Fri 02/12/2022	14.45 – 16.15	N34

Syllabus of the course

Lecture	Topics	Book and Syllabus references
1	**Introducing data management with Excel** - Revision of some basic elements of Excel - Basic formulas and functions (percentage calculation, SUM, AVERAGE, MIN, MAX) - Correct use of absolute and relative references - Basic conditional formatting ***Exercises***	**Book Sections: 1, 2, 7, 14** - *Syllabus 3.0 categories:* ***1 - 2***
2	**Conditional data processing** - Logical values and tests - IF function - Managing multiple conditions - Logic functions (AND, OR) and nested IFs - Advanced conditional formatting with formulas ***Exercises***	**Book Sections: 2, 7, 14** - *Syllabus 3.0 categories:* ***1 - 2***

Lecture	Topics	Book and Syllabus references
3	**Organizing data** - Charts creation and formatting - Advanced charts (mixed on two axis) - Worksheets management - Format as Table - Sorting and filtering tools - Subtotal ***Exercises***	**Book Sections:** **2, 8, 11, 12, 15** - *Syllabus 3.0* *categories:* ***1 - 3 - 4***
4	**Advanced functions** - Mathematical functions - Statistical functions - Database functions - Working with references on different worksheets - Managing custom lists ***Exercises***	**Book Sections:** **7, 12, 14** - *Syllabus 3.0* *categories:* ***2 - 4***
5	**Analyzing data and customizing formats** - Analyze data with Pivot tables - Managing Pivot tables options and calculations - Date and time format and related functions - Create custom number formats ***Exercises***	**Book Sections:** **7, 13, 14** - *Syllabus 3.0* *categories: 2 - 4*
6	**Creating simple tools with Excel** - Text functions - Lookup and reference functions - Data validation - Security and protection options ***Exercises***	**Book Sections:** **3, 14, 18** - *Syllabus 3.0* *categories: 2 - 5 - 7*
7	**What-if analysis** - Financial functions - Create and manage Scenarios and Summaries - Define and use cells names - Other What-if analysis tools ***Exercises***	**Book Sections:** **5, 9, 14, 16** - *Syllabus 3.0* *categories: 2 - 4 - 6*

Lecture	Topics	Book and Syllabus references
8	**Data gathering and sharing** - Managing external data - Advanced copy and paste options - Auditing tools - Reviewing tools - Creating and managing Templates ***Exercises***	**Book Sections: 4, 6, 10, 18, 19** - *Syllabus 3.0 categories: 5 - 6 - 7*
9	**Automations in Excel** - Introducing Excel macros - Macro recording - VBA basic editing of recorded macros - Macro triggering - Ribbon customization ***Exercises***	**Book Sections: 1, 2, 17** - *Syllabus 3.0 categories: 6*
10	**General review and final test**	

Suggested bibliography

- *ECDL Advanced Spreadsheet Software* (BCS ITQ L3) - Excel 2016 version (ISBN: 9780857411990), CiA Training Ltd, 2016
- M. Ballerini, A. Clerici, M. Debernardi, D. Del Corno, M. De Pra, *Excel Workbook (third edition)*, Egea, 2021

Software

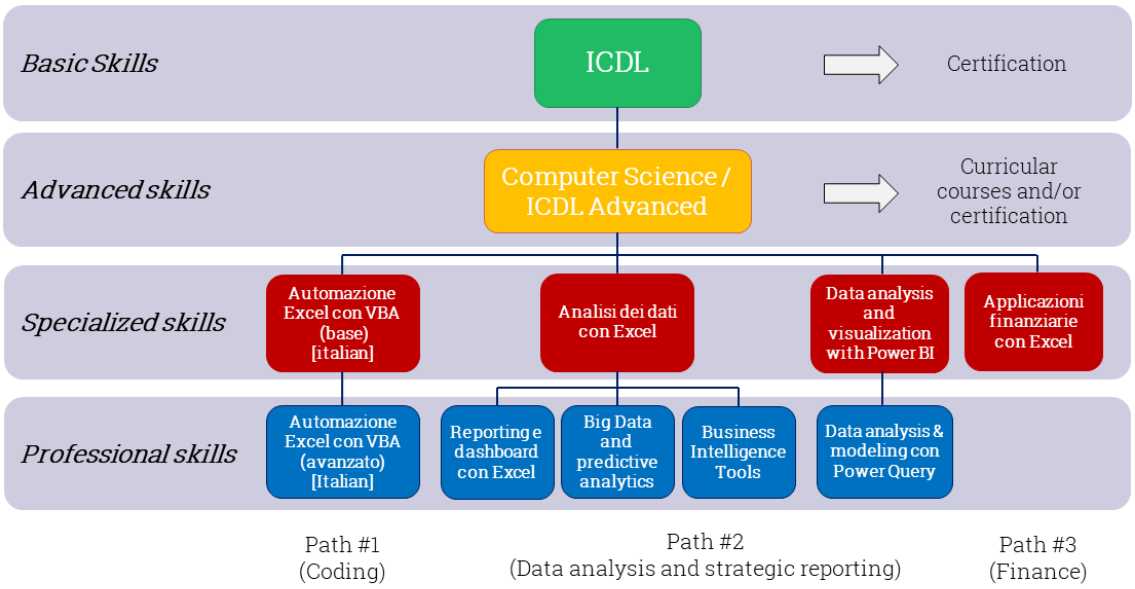
Microsoft Office Excel 2019/365

Available seats

This activity is limited to **110** participants. Registrations cannot be carried out once this number has been reached or after closing of the registration period.

Spreadsheet paths

This course can be intended as part of a wider path:


Basic Skills
ICDL
Certification
Advanced skills
Computer Science / ICDL Advanced
Curricular courses and/or certification
Specialized skills
Automazione Excel con VBA (base) [italian]
Analisi dei dati con Excel
Data analysis and visualization with Power BI
Applicazioni finanziarie con Excel
Professional skills
Automazione Excel con VBA (avanzato) [Italian]
Reporting e dashboard con Excel
Big Data and predictive analytics
Business Intelligence Tools
Data analysis & modeling con Power Query
Path #1 (Coding)
Path #2 (Data analysis and strategic reporting)
Path #3 (Finance)