

## AMFM-2425-501-Advanced Excel for Finance and Financial Markets

Name of lecturer(s) & Email Benjamin LORENT <a href="mailto:Benjamin.Lorent@ulb.be">Benjamin.Lorent@ulb.be</a>	Level/Semester, Status, Timing Semester 1 Optional Between 16-11-24 and 17-11-24	ECTS*, CH & SDL** 0 6 0
<p><b>Description of the course</b></p> <p>This course is for intermediate users who want to take Excel skills to the next level using real-world examples. You will learn key functions that are required by Finance users when they are working with their business data. The introduction to Excel VBA (Visual Basic for Applications) will provide participants with the ability to automate any Excel task. Excel Tasks that would normally take an extensive amount of work and time to complete can ultimately be automated and completed in a single click of a button. This part is perfect for users who have an intermediate understanding of Excel and want to expand its usability.</p>		
<p><b>Course units</b></p> <ol style="list-style-type: none"> <li>1. How to analyse data with data tables and scenarios analysis</li> <li>2. Present main formulas useful in finance: NPV, XNPV, FV, PV, IRR, XIRR, MIRR, RATE, loan amortization tables, depreciation tables...</li> <li>3. Present a DCF model How to calculate portfolio statistics: volatility, correlation, covariance or a stock beta using historical data (slope formula)...</li> <li>4. How to simulate random numbers like stock prices, in the context of Monte Carlo simulations</li> <li>5. Introduction to VBA and Excel Macros               <ol style="list-style-type: none"> <li>a. Overview</li> <li>b. Using Excel functions in VBA</li> <li>c. Automate routine Excel tasks</li> <li>d. Working with the most common VBA objects in Excel like arrays</li> </ol> </li> </ol>		
<p><b>Course Learning Outcomes (CLOs)</b></p> <ol style="list-style-type: none"> <li>1. Analyse data with Data Tables, Scenario Analysis, Goal Seek and Solver</li> <li>2. Use main financial formulas: NPV, IRR, FV, PV, RATE, MIRR...</li> <li>3. Build amortization and depreciation tables or present a DCF model</li> <li>4. Calculate key data for portfolios as volatility, expected return, correlation, beta...</li> <li>5. Simulate data in Excel like a stock price (in the context of Monte Carlo simulations)</li> <li>6. Know when and why to use VBA</li> <li>7. Get familiar with the basics of VBA and Excel Macros</li> <li>8. Automate Excel task using VBA</li> </ol>		
<p><b>Prerequisite (if any)</b> /</p>		
<p><b>Contribution to Programme Learning Objectives (PLOs)***</b></p> <ul style="list-style-type: none"> <li>• Learning Objective 1.1: Introduction</li> <li>• Learning Objective 2.1: Not Covered</li> <li>• Learning Objective 3.1: Not Covered</li> <li>• Learning Objective 4.1: Not Covered</li> <li>• Learning Objective 5.1: Introduction</li> </ul>	<p><b>Evaluation scale</b> Non Applicable</p>	
<p><b>Main Teaching methods used in the course</b> Guided Instruction, Case Based Learning, Excercises</p>		
<p><b>Contribution to the Environmental, social and governance (ESG)</b> Course Contribution to ESG: No Contact Hours are dedicated to ESG: 0 Contact Hours containing climate solutions for how organisations can reach net zero: 0 Description of contribution: /</p>		

**Notice:** The information available in the course outline is subject to change. Please keep yourself informed at all times by regularly checking Canvas.

\*ECTS - European Credit Transfer and Accumulation System (1 ECTS = 30 hours of learning)

\*\*CH - Contact Hours in class or online, SDL - Self-Directed Learning including readings, homework, group work, preparation to assessment, etc

\*\*\*PLO - Programme Learning Objectives are available on the curriculum page

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### Assessment methodology / Learners Use of Time and Load

#### Assignment one

- weight 0%
- workload estimated = 0 hours
- due /
- Guidelines: /

#### Assignment two

- weight 0%
- workload estimated = 0 hours
- due /
- Guidelines: /

### Readings

#### Required

Financial Modelling by Simon Benninga. The MIT Press.

#### Recommended

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### Other Learning Materials

In-house exercises and cases available in Canvas.

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