

**DEREE COLLEGE SYLLABUS FOR: FN 4535 FINANCIAL MODELLING**

(Previously FN 4335 Financial Modeling)

(Updated Fall 2021)

**UK LEVEL: 6**  
**UK CREDITS: 15**  
**US CREDITS: 3/1/3****PREREQUISITES:**

AF 2007 Financial Accounting  
EC 1000 Principles of Microeconomics  
FN 2128 Principles of Finance  
FN 3213 Corporate Finance or FN 3105 Financial Management  
MA 2021 Applied Statistics

**CATALOG DESCRIPTION:**

Basic and advanced excel functions and charts for financial analysis. Forecasting of the main financial statements. Equity valuation using Discounted Free Cash Flows Method, Comparable Companies Method and Comparable Transactions Method. Sensitivity Analysis. Financial modelling for decision-making.

**RATIONALE:**

Financial modelling is essential to support a variety of investing and financial decisions as well as to conduct an equity valuation. This course provides the necessary theoretical knowledge and technical skills for anyone who plans to embark to any sort of financial analysis. This course exposes students to spreadsheet modelling as well as to practical application of the methods, tools and practices used for capital budgeting, financing, equity valuation and sensitivity analysis. Through the integration of previous knowledge in the fields of economics, accounting and finance, students will be able to leverage market data and company-specific information in order to support their decision making regarding real business problems under conditions of uncertainty.

**LEARNING OUTCOMES:**

After taking this course student should be able to:

1. Support real business problems with spreadsheet models
2. Examine required parameters in order to forecast financial figures
3. Appraise the equity value of a company by applying various valuation methods
4. Construct a fully parameterized financial model for decision making

**METHOD OF TEACHING AND LEARNING:**

In congruence with the teaching and learning strategy of the college, the following tools are used:

- Class lectures and seminar-style class discussion of key terms and concepts with appropriate examples.
- Use of financial models, in-class problem solving exercises and real-business examples that engage students and enhance their employability
- Use of the Blackboard learning platform: in order to enhance the teaching and learning process, instructors may use the site to post their announcements, upload related course material, lecture notes, assignment instructions and additional resources.
- Articles and additional material will be supplied throughout class meetings.
- Use of the Simulated Trading Room for illustrating examples.

**ASSESSMENT:****Summative:**

	<table border="1" data-bbox="613 138 1357 302"> <tr> <td>1<sup>st</sup> assessment: Individual spreadsheet model development for addressing a real business problem</td> <td><b>30%</b></td> </tr> <tr> <td>Final assessment: Individual coursework and report on equity valuation; 2,000-2,200 words</td> <td><b>70%</b></td> </tr> </table> <p><b>Formative:</b></p> <table border="1" data-bbox="613 363 1357 401"> <tr> <td>Formative coursework</td> <td><b>0%</b></td> </tr> </table> <p>The formative coursework prepares students for the assessments and ensures that students are actively engaged during the term.</p> <p>The 1<sup>st</sup> assessment tests Learning Outcome 1. The final assessment tests Learning Outcomes 2, 3 and 4.</p> <p>Students are required to resit failed assessments in this module.</p>	1 <sup>st</sup> assessment: Individual spreadsheet model development for addressing a real business problem	<b>30%</b>	Final assessment: Individual coursework and report on equity valuation; 2,000-2,200 words	<b>70%</b>	Formative coursework	<b>0%</b>
1 <sup>st</sup> assessment: Individual spreadsheet model development for addressing a real business problem	<b>30%</b>						
Final assessment: Individual coursework and report on equity valuation; 2,000-2,200 words	<b>70%</b>						
Formative coursework	<b>0%</b>						
<b>INDICATIVE READING:</b>	<p><b>REQUIRED READING:</b></p> <p>Benninga, S., Financial Modeling. MIT Press, latest edition</p> <p>Other library sources, including journal articles accessible through the Library, as assigned by the instructor.</p> <p><b>RECOMMENDED READING:</b></p> <p>Samonas, M., 2015. Financial Analysis Forecasting and Modelling. A Framework for Long Term Forecasting. Wiley.</p> <p>Brigham, E.F., Ehrhardt, M.C., 2017. Financial Management: Theory and Practice. Cengage Learning.</p> <p>Damodaran, A., 2001. Corporate Finance: Theory and Practice. John Wiley &amp; Sons.</p> <p>Mayes, T.R., 2017. Financial Analysis with Microsoft Excel 2016, Cengage Learning.</p> <p>Peterson, P.P., Fabozzi, F.J., 2002. Capital Budgeting: Theory and Practice. John Wiley &amp; Sons.</p> <p>Pignataro, P., 2015. Mergers, Acquisitions, Divestitures, and Other Restructurings. Wiley.</p> <p>Rosenbaum, J., Pearl, J., 2013. Valuations, Leveraged Buyouts, and Merge &amp; Acquisitions. Wiley.</p> <p>Titman, S., Martin, J.D., 2015. Valuation: The Art and Science of Corporate Investment Decisions. The Pearson Education.</p>						
<b>INDICATIVE MATERIAL:</b> <i>(e.g. audiovisual, digital material, etc.)</i>	<p><b>REQUIRED MATERIAL:</b> N/A</p> <p><b>RECOMMENDED MATERIAL:</b> N/A</p>						
<b>COMMUNICATION REQUIREMENTS:</b>	Use of appropriate academic conventions as applicable in oral and written communications.						
<b>SOFTWARE REQUIREMENTS:</b>	Word, Excel, PowerPoint, Bloomberg						

<b>WWW RESOURCES:</b>	Damodaran Online European Spreadsheet Risks Interest Group US Securities and Exchange Commission
<b>INDICATIVE CONTENT:</b>	<ol style="list-style-type: none"> <li>1) Basic and advanced excel functions for financial analysis</li> <li>2) Basic and advanced excel charts for financial analysis</li> <li>3) Forecasting methods       <ol style="list-style-type: none"> <li>a) Qualitative vs. quantitative methods</li> <li>b) Top-down vs. bottom-up approach</li> </ol> </li> <li>4) Forecasting of income statement       <ol style="list-style-type: none"> <li>a) Revenue</li> <li>b) Operating expenses</li> <li>c) Depreciation and amortization</li> <li>d) Interest expenses</li> </ol> </li> <li>5) Forecasting of balance sheets       <ol style="list-style-type: none"> <li>a) Current trade assets</li> <li>b) Noncurrent gross and net assets</li> <li>c) Current trade liabilities</li> <li>d) Current debt</li> <li>e) Noncurrent debt</li> <li>f) Paid-in capital</li> <li>g) Retained earning</li> </ol> </li> <li>6) Forecasting of cash flows       <ol style="list-style-type: none"> <li>a) Direct vs. indirect method</li> <li>b) Non-cash adjustments</li> <li>c) Trade working capital adjustments</li> <li>d) Changes in assets, liabilities and equity</li> </ol> </li> <li>7) Equity Valuation       <ol style="list-style-type: none"> <li>a) Free cash flows calculation</li> <li>b) Estimation of the Cost of Equity</li> <li>c) Calculation of Weighted Average Cost of Capital</li> <li>d) Valuation using Discounted Free Cash Flows Method</li> <li>e) Valuation using Comparable Companies Method</li> <li>f) Valuation using Comparable Transactions Method</li> </ol> </li> <li>8) Sensitivity Analysis       <ol style="list-style-type: none"> <li>a) Scenario Manager analysis in excel</li> <li>b) Data Table analysis in excel</li> </ol> </li> <li>9) Financial modelling for decision making       <ol style="list-style-type: none"> <li>a) Calculation of financial ratios</li> <li>b) Analysing Risk using Monte Carlo simulation</li> <li>c) Modelling with Solver, Goal Seek and Data Analysis tools in excel</li> <li>d) Cases of capital budgeting / investment decisions</li> <li>e) Cases of Financing decisions</li> </ol> </li> </ol>