

## **Syllabus Module GMT 3031: Financial Modelling for Corporate Finance and Corporate Valuation**

2 SWS, 3 ECTS-Credits, Language of instruction: English

<u>Time and location:</u>	<b>BCR6, BIB22, BSWP6, BWR6, ISP13, and others:</b> Wednesdays, 03:30 pm - 05:00 pm (W1.3.04) From: 18 March 2020 to: 01 July 2020.
<u>Language:</u>	English.
<u>Workload:</u>	3 ECTS, 2 SWS (which corresponds to 90 hours, of which 30 hours lectures and 60 hours for self-study).
<u>Level:</u>	Bachelor (advanced).
<u>Requirements:</u>	Proficiency in English (at least B2).
<u>Assessment:</u>	Excel-based take-home exam

### **Lecturer:**

Prof. Dr. oec. HSG Korbinian Eichner, M.A. HSG

Professor of Business Administration and Corporate Finance at Pforzheim University

Lecturer in Corporate Finance at University of St. Gallen (HSG), Switzerland

Office hours: Mondays, 09:45 am - for 11:15 am (W2.3.06).  
Please make an appointment by Email.

E-Mail: korbinian.eichner@hs-pforzheim.de

### **Course overview:**

Excel-based financial modelling is a **core required skill** for professional areas such as Corporate Development, Investment Banking (Mergers & Acquisitions, equity research, equity and debt capital markets), risk management, asset management, treasury, and other financial areas. This is due to the fact that decisions in a business context need to be transparent and supported by profound financial analysis. Therefore, the main objective of the course is to acquire the ability to successfully build and apply basic financial models that can be used in corporate financial decision making processes.

The course focusses on the **application** of corporate finance concepts in Excel and extends and builds on accounting and finance knowledge gained in other undergraduate business administration courses (like “Bilanzierung und Finanzwirtschaft” (Accounting and Finance), or similar, if you are an exchange student).

This course is primarily about “**doing**“. Students will spend approximately three quarters of the scheduled time on implementing the tasks outlined below in Excel spreadsheets.

### **Course prerequisites:**

- **Financial accounting skills:** Students should be familiar with the content and structure of financial statements (balance sheet, profit and loss statement). Although there will be a short recap session at the beginning of the semester, students should be familiar with reading financial statements.
- **Capital budgeting skills:** Students should be familiar with basic capital budgeting concepts (in particular net present value and internal rate of return).
- **Basic Excel skills:** Students should be familiar with the main functionalities of Microsoft Excel.

### **Course content:**

#### **1. Introduction to financial modelling**

- Recap: Accounting and finance basics, principles of corporate finance.
- Purposes and applications of financial modelling in finance.

#### **2. Fundamentals of Financial Modelling**

- Financial modelling dos and don'ts.
- Excel formulas for financial applications.
- Working with shortcuts in Microsoft Excel.

#### **3. Financial Modelling for general corporate financial topics**

- Financial statement analysis with Microsoft Excel.
  - Key performance indicators.
  - Vertical and horizontal analyses.
- Forecasting and business planning with Microsoft Excel.
  - Building an integrated financial model.
  - Linking balance sheet, profit and loss statement and cash flow statement forecasts.
- Liquidity and cash flow analysis with Microsoft Excel.
- Scenario analyses with Microsoft Excel.

#### **4. Financial Modelling for specific corporate financial topics**

- Business Valuation Modelling with Microsoft Excel.
  - Discounted cash flow (DCF).
  - Comparable companies (Trading multiples).

- Mergers & Acquisitions (M&A) Modelling with Microsoft Excel.
  - Basic consolidation steps.
  - EPS accretion and dilution analysis.
- Leveraged Buyout (LBO) Modelling with Microsoft Excel.

### **Learning objectives:**

Having completed this course, students should:

- understand the relevance of financial models for various corporate finance purposes.
- know how to build financial models for various corporate finance applications.
- know how to solve basic corporate finance problems in Excel.
- be able translate corporate finance problems efficiently in Excel.

### **Course material:**

Course and background material incl. solutions to exercises will be either distributed in class or uploaded to Moodle throughout the semester. Students are expected to work through the background material at home to make best use of the time in class.

### **Graded work:**

The final grade will be based on an Excel-based exam (take-home exam).

Grades will range between 1.0 (very good) and 5.0 (fail), in 0.3 and 0.7 steps.

- 1.0 Very good, a performance significantly above the average.
- 2.0 Good, an above average performance.
- 3.0 Satisfactory, an average performance.
- 4.0 Adequate, a below average performance with noticeable shortcomings.
- 5.0 Fail, an unacceptable performance.

### **Recommended literature:**

1. Benninga, S.: Principles of Finance With Excel, 1<sup>st</sup> edition, Oxford University Press.
2. Häcker, J./Ernst, D.: Financial Modeling: An Introductory Guide to Excel and VBA Applications in Finance, 1<sup>st</sup> edition, Palgrave Macmillan.
3. Rosenbaum, J./Pearl, J.: Investment Banking: Valuation, Leveraged Buyouts, and Mergers and Acquisitions, latest edition, Wiley.

**Supplementing literature:**

- Bruner, R./ Perella, J.: Applied Mergers & Acquisitions, 1<sup>st</sup> edition, Wiley.
- Damodaran, A.: Applied Corporate Finance, latest edition, Wiley.
- Damodaran, A.: Investment Valuation, latest edition, Wiley.
- Day, A.: Mastering Financial Modelling in Microsoft Excel: A Practitioner's Guide to Applied Corporate Finance, latest edition, Pearson Education.
- Day, A.: Mastering Cash Flow and Valuation Modelling, 1<sup>st</sup> edition, Pearson Education.
- Soubeiga, E.: Mastering Financial Modelling; A Professional's Guide to Building Financial Models in Excel, 1<sup>st</sup> edition, McGraw-Hill Education.
- Tjia, J.: Building Financial Models: The Complete Guide to Designing, Building, and Applying Projection Models, 1<sup>st</sup> edition, McGraw-Hill Education.

**Learning objectives (detailed breakdown):**

The following illustrates how the course contributes to the bachelor program's common learning objectives:

Objective	Course contributions to objective	Assessment
<p>1.1 Students demonstrate that they have basic knowledge in Business Administration.</p> <p>1.2 Students demonstrate their distinguished and sound competencies in Economics.</p> <p>1.3 Students have command of legal methodology for case solutions on basis of claims.</p> <p>1.4 Students are able to solve business problems by applying quantitative methods.</p>	<p>Focusing on applying finance and accounting concepts in Microsoft Excel and therefore building on previous finance and accounting courses, which addressed finance and accounting topics in a lecture setting.</p> <p>Having a general overview about the main areas of corporate finance and understanding how Microsoft Excel can help in achieving corporate finance goals.</p> <p>Being able to breakdown financial performance (financial analysis), forecasting financial performance (business planning), calculating funding gaps (liquidity planning), estimating the value of a firm (valuation), estimating effects of a business combination (M&amp;A) in Microsoft Excel.</p>	<p>Discussions within class, exercises, exam.</p>
<p>2.1 Students demonstrate proficiency in using computer programs to solve business problems.</p> <p>2.2 Students are able to use information systems</p>	<p>Spending approx. 75% of the time in class discussing and working on problems in Microsoft Excel.</p> <p>Learning how Microsoft Excel can be used efficiently to solve difficult corporate finance problems.</p>	<p>Discussions within class, exercises, exam.</p>

effectively in real world business settings.	Using public capital markets and company data and information sources to support students' solutions of exercises.	
3. Students are able to apply analytical and critical thinking skills to complex problems.	<p>Focusing on execution of financial modelling and understanding where major pitfalls lie, when building financial models in Microsoft Excel.</p> <p>Identifying, evaluating and selecting the "most appropriate" solutions to corporate finance issues, with which firms are confronted.</p> <p>Developing a skillset of analytical competence of how to address a qualitative problem in a quantitative manner.</p>	Discussions within class, exercises, exam.
4. Students are able to develop business ethics strategies and apply them to typical business decision-making problems.	<p>Discussion of drivers of synergies in M&amp;A and their impact on companies' stakeholders.</p> <p>Discussion of drivers of LBO returns and their impact on companies' stakeholders.</p>	Discussions within class, exercises.
<p>5.1 Students are able to express complex problems effectively in writing</p> <p>5.2 Students demonstrate their oral communication skills in presentations.</p>	<p>Working on exercises, which require expressing solutions in writing.</p> <p>Being able to communicate in an understandable way in English, so that their peers can follow their argumentation.</p> <p>Encouraging students to participate in class discussions, when problems and solutions are discussed.</p>	Discussions within class, exercises, exam.
6. Students show that they are able to work successfully in a team by performing practical tasks.	<p>Working on exercises in class, which require finding solutions to corporate finance problems in teams.</p> <p>Encouraging students to discuss and present their solutions to their peers.</p>	Discussions within class, exercises.
<p>7.1 Expert knowledge.</p> <p>7.2 Secure and competent application of methods and instruments.</p> <p>7.3 Interpretation and critical reflection as well as development of alternatives.</p>	<p>Introduction of advanced corporate finance concepts like Mergers &amp; Acquisitions and Leveraged Buyouts (LBOs) and how to analyze them with Microsoft Excel.</p> <p>Providing immediate feedback on exercises in class.</p> <p>Discussion of problem solving alternatives for various exercises in class.</p>	Discussions within class, exercises, exam.