

# Module Handbook

## International Finance Master WiSe 16/17

Valid: Wintersemester 2016/2017

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## Modules

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## Description of Module

<b>Code</b> 103-001	<b>Title of Module</b> Financial Management
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <p>Students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>· Summarize and interpret concepts and differences in international accounting, management accounting and financial accounting.</li> <li>· Interpret and apply different concepts of modern financial management.</li> <li>· Recognize new problems in financial management, compare various methods and implement them in a suitable and effective way.</li> </ul>
<p><b>Content</b></p> <p>Financial Management</p> <ul style="list-style-type: none"> <li>• Management Accounting</li> <li>• Financial Modeling</li> <li>• Applied IFRS</li> </ul>
<p><b>Teaching Forms</b></p> <p>Lectures and Practicals</p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	Basics in accounting
<b>Preparation for the Module</b>	<p>Online course "Financial Accounting" of Harvard Business School recommended.</p> <p>Pre-reading of the recommended literature.</p>

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	<p>Students can apply acquired knowledge, skills and competencies in the following courses:</p> <ul style="list-style-type: none"> <li>• Financial Analysis</li> <li>• Equity Capital Markets &amp; Alternative Investments</li> <li>• Applied International Corporate Finance</li> <li>• Applied Quantitative Corporate Finance</li> </ul> <p>All other programs in Finance and Business Administration</p>
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

### Content

The contribution of the module to sustainable development is the awareness that all company stakeholders must gain thorough insight into the economic development of companies based on international accounting standards. Especially in internationally operating companies, the consolidation of financial figures is a prerequisite for sustainable management. Furthermore, sustainable development demands transparent coverage of all internal processes and calculations.

## Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Klausur (120 Minuten)	100 %

## Organization of Course

<b>Responsible for Module</b> Prof. Dr. Daniela Fischer		
<b>Further Persons Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst, Mr. Marco Koch		
<b>Type of Module</b> Pflicht	<b>Recurrence</b> jedes Wintersemester	<b>Duration</b> 1 Semester
<b>Admission Criteria</b> none	<b>ECTS Points</b> 7,00	<b>Weekly Attendance</b> 6,00
<b>Workload</b> 7,00 x 25 Stunden = 175,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b> 67,5 Std. / 38,6 %	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

## Content Structure

Code	Title of the Module Element
103-001-01	Management Accounting
103-001-02	Financial Modeling
103-001-03	Applied IFRS

## Description of the Module Element

Code	Title of the Module Element
103-001-01	Management Accounting

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

- summarize and interpret state-of-the-art concepts in management accounting and performance management
- transfer strategy into operational terms and have the necessary knowledge to control strategy execution with the Balanced Scorecard toolset
- understand Value Based Management in the context of capital market and management information needs
- evaluate and manage overhead costs adequately by applying Activity Based Costing and interpreting the compiled information
- support new product development according to market needs, particularly meeting the necessary price and cost targets by applying Target Costing
- give an overview of planning & reporting systems and understand the Beyond Budgeting concept
- see the different management accounting and performance management concepts and tools in an overall context and understand their interdependences
- ultimately be enabled on this basis to act as a management accountant or controller in enterprises after finishing their master education

With respect to acquired skills, students shall be able to do the following:

- evaluate and analyze business concepts and entity information and identify data relevant to management accounting and performance management
- solve problems in theory and practice by applying the above mentioned concepts and tools
- evaluate and interpret practical cases and derive conclusions independently
- present their solutions convincingly
- act as a reliable support and consultant to the management

With respect to acquired competencies, students shall be able to do the following:

- recognize practical business challenges in the areas of management accounting and performance management
- apply and modify their knowledge to new and complex challenges
- draw on and make use of adequate sources of information in order to solve these challenges
- perform necessary calculations in the course of problem solving with the above mentioned concepts and tools
- reflect the derived results critically and draw conclusions
- develop alternative solutions and give recommendations

- comprehensively present their solutions and defend them in argument

Wissen	Knowledge	Skills	Competencies
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### Content

1. Management Accounting and Performance Management within the CFO-Organization: modern role & understanding, comparison of central European and American concept of management control
2. Advanced concepts in Strategic Controlling: group controlling, strategy & balanced scorecard, practical examples of value based management
3. Advanced concepts in Operational Controlling: operational planning & reporting, beyond budgeting, performance measurement, activity based costing, target costing

### Teaching Forms

Lectures and Practicals

### Teaching Methods

Lectures, discussions, exercises, case analysis, group work, presentations, project work.

### Literature/Learning Materials

- Albright / Ingram / Hill (2006): Managerial Accounting
- Ansari/Bell (2009): Target costing
- Anthony/Govindarajan (2006): Management Control Systems
- Bowhill (2008): Business planning & control
- CIMA – Chartered Institute of Management Accountants (2005): Management Accounting – Official Terminology
- Clifton/Bird/Albano/Townsend (2004) Target costing. Market-driven product design
- Cooper/Slagmulder (1997): Target Costing and Value Engineering
- Copeland/Koller/Goedhart/Wessels (2005): Valuation – Measuring and managing the value of Companies
- Currle (2010): Teaching Material on all topics
- Drury (2007): Management & Cost Accounting
- Hope/Fraser (2003): Beyond Budgeting
- Horngren / Sundem / Stratton (2010): Introduction to management accounting
- Horváth (2008): Controlling, 11. edition (optional for german speaking students)
- Kaplan/Cooper (1998): The design of cost management systems
- Kaplan/Cooper (1998): Cost & Effect
- Kaplan/Norton (1996): Translating Strategy into Action: The Balanced Scorecard, Boston 1996
- Kaplan/Norton (2004): Strategy Maps, Boston, 2004
- Kim/Mauborgne (2005): Blue ocean strategy
- Mintzberg/Lampel/Ahlstrand (2008): Strategy Safari
- Porter (1998): Competitive Advantage
- Rappaport (1998): Creating shareholder value
- Simons (2005): Levers of Organization Design

- Sutton/Lee/Lee (1998): Advances in financial planning & monitoring
  - Young/O'Byrne (2001): EVA and Value Based Management
- Case Studies and Exercises using various instruments (e.g. building up a group BSC and functional BSCs, value based management with calculating WACC and Economic Profit, ABC-costing example with calculations, target costing example with calculations)

**Specifics**

Board, overhead projector, PowerPoint-presentations

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> ja	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>



## Description of the Module Element

<b>Code</b> 103-001-02	<b>Title of the Module Element</b> Financial Modeling
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## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

- describe the philosophy of financial modeling in their own words
- evaluate a financial problem based on the financial modeling approach and give an objective opinion how to solve the problem with the help of financial modeling instruments
- discuss the principles of financial modeling

With respect to acquired skills, students shall be able to do the following:

- independently set up different modules in order to solve a financial problem
- structure a financial problems using different modules and apply different Excel functions and VBA functions
- present and discuss the conclusions in front of an professional audience

With respect to acquired competencies, students shall be able to do the following:

- solve unknown financial problems with the help of financial modeling instruments
- make decisions on a scientific or academic basis based on the limited data available revise financial models presented by other groups

Wissen	Knowledge	Skills	Competencies
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### Content

1. What are Models and what is Financial Modeling?
2. Guidelines for an Effective Financial Modeling
3. Conception
  - Analysing Requirement Profiles and Defining Service Catalogues
  - Building Financial Models in Modules
  - Using Templates for the Optic Design of a Financial Model
  - Advantages of Separating Assumptions, Calculations and Results
  - Working with Comprehensive Financial Models
  - Borders: Putting Data behind Bars
  - Stressing Important Aspects with Colours
  - Better Seizing of Numbers through Formats

- Splitting Texts into Two Rows
4. Identifying the Basic Problem
    - Using Creative Techniques
    - Visualising with Bubble Charts
  5. Data Collection and Data Analysis
  6. Prototyp
    - The Formula Sheet – The Translation Program
    - Using Formulas
    - Documentation of a Financial Model
    - Securely Retrieving Data
  7. Sensitizing and Scenarios
    - Sensitizing
    - Scenarios
  8. Testing the Performance of a Financial Model
    - Formula Monitoring
    - Formula Validation Can Help
    - Formula Analysis Progressively Analyzing Formulas
  9. Presenting Results and Recommendation
    - Recommendations for Designing Diagrams
    - Creating Simple Diagrams with Excel
    - Dynamic Diagrams

#### **Teaching Forms**

Lectures and Practicals

#### **Teaching Methods**

Lectures, case study, discussions, exercises, case studies, group work, presentations, project work

#### **Literature/Learning Materials**

Benninga, S.: Financial Modeling, MIT Press, 2008

Prexl, S. et al.: Financial Modeling, Schaeffer-Poechel, 2010

#### **Specifics**

Overhead Projector, PowerPoint-presentations for the Case Study, Live-simulations, Excel sheets for the Case Study

### **Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> ja	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-001-03	Applied IFRS

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

- summarize and interpret concepts and differences in international accounting
- describe the concepts and role of revenue, expense, asset, liability and equity accounts in financial accounting
- give an overview of the presentation and disclosure components of financial statements
- explain deviations between IFRS and US GAAP
- set the current legal environment in relation to the audit approach of an accounting firm

With respect to acquired skills, students shall be able to do the following:

- demonstrate valuation and presentation of balance sheet asset and liability accounts
- evaluate and analyze entity information and identify data relevant to financial accounting and reporting
- interpret basic financial statement information like balance sheet, income statement and statement of cash flows
- report results of conversion to international accounting in writing in a (consolidated) financial statement format

With respect to acquired competencies, students shall be able to do the following:

- perform calculations of measurement and valuation of important financial statement positions
- compare IFRS vs. US GAAP or local accounting standards

Wissen	Knowledge	Skills	Competencies
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### Content

#### 1. Concept of International Accounting:

Capital market based history of US GAAP and IFRS, Standard setting bodies, Framework of international accounting (objective basic principles, Elements of F/S, Accounting policies, Subsequent events)

#### 2. Presentation and disclosure of financial statements:

Balance sheet, Income statement, Statement of changes in Equity, Statement of cash flows, Notes to the financial statements (incl. Segment reporting), Interim financial reporting, Related Parties disclosures

#### 3. Recognition, measurement and valuation of financial statement positions

Tangible assets (PPE, impairment, investment property, leases, non-current assets held for sale, discontinued operations)  
 Goodwill and Intangible assets (R&D)  
 Financial assets (business combinations, associates, joint ventures, financial instruments)  
 Inventories, construction contracts, revenue recognition (POC method etc.)  
 Cash  
 Provisions, contingent liabilities  
 Employee benefits, stock compensation  
 Income taxes (incl. Deferred taxes)  
 Earnings per share

4. Conversion process of a company to international GAAP (first time adoption of IFRS / US-GAAP)

5. The audit approach of an international accounting firm

6. The impact of Sarbanes Oxley and Corporate Governance on international accounting and auditing

7. Summary: IFRS / US-GAAP comparison

8. Recent developments ( i.e. analysis of financial statement restatements, international accounting for SME, development of IFRS / US GAAP)

**Teaching Forms**

Lectures and Practicals

**Teaching Methods**

Lectures, discussions, exercises, case analysis, group work

**Literature/Learning Materials**

Wiley (editor, Wiley VCH Verlag GmbH & Co. KGaA, (2010): International Financial Reporting Standards (IFRS) 2010: English & German edition of the official standards approved by the EU (paperback)

Ernst & Young (editor, Ernst & Young von John Wiley & Sons): International GAAP: Generally Accepted Accounting Practice under International Financial Reporting Standards (IFRS). 2010 (paperback)

**Specifics**

Board, overhead projector, PowerPoint-presentations,  
 Excel sheets, sample financial statements for downloading

**Organization of Course**

Weekly Attendance	Division into Groups	Recommended Semester	Language
2,00	nein	1 Semester	Englisch

<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/ Group Work</b>
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## Description of Module

<b>Code</b> 103-002	<b>Title of Module</b> Financial Analysis
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <p>Students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>Analyze and evaluate financial statements, bonds and stocks.</li> <li>Apply modern instruments of corporate, bond and stock analysis.</li> <li>Draw on and make use of adequate sources of information in order to assess and value companies, bonds and stocks.</li> </ul>
<p><b>Content</b></p> <p>Financial Analysis:</p> <ul style="list-style-type: none"> <li>Financial Statement Analysis</li> <li>Bond Analysis</li> <li>Equity Analysis</li> </ul>
<p><b>Teaching Forms</b></p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	Basics in accounting
<b>Preparation for the Module</b>	Pre-reading of the recommended literature.

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	<p>Students can apply acquired knowledge, skills and competencies in following other courses:</p> <ul style="list-style-type: none"> <li>Financial Management</li> <li>Equity Capital Markets &amp; Alternative Investments</li> <li>Applied International Corporate Finance</li> <li>Applied Quantitative Corporate Finance</li> <li>Portfolio Management &amp; Risk Management</li> <li>Derivatives &amp; Financial Engineering</li> </ul> <p>All other programs in Finance and Business Administration</p>
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

<b>Content</b>
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Sustainable investment decisions demand careful and sophisticated financial analysis. They require in-depth knowledge of instruments in order to scrutinize different asset classes such as stocks or bonds. Furthermore, students need to possess the skills to analyze financial statements in order to assess the sustainability of investments.

### Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Klausur (120 Minuten)	80 %
Referat/Präsentation (0 Stunden)	20 %

### Organization of Course

<b>Responsible for Module</b> Prof. Dr. Serge Ragotzky		
<b>Further Persons Responsible for Module</b> Prof. Dr. Frank Andreas Schittenhelm, Prof. Dr. Uwe Stehr		
<b>Type of Module</b> Pflicht	<b>Recurrence</b> jedes Wintersemester	<b>Duration</b> 1 Semester
<b>Admission Criteria</b> none	<b>ECTS Points</b> 8,00	<b>Weekly Attendance</b> 6,00
<b>Workload</b> 8,00 x 25 Stunden = 200,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b> 67,5 Std. / 33,8 %	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

### Content Structure

Code	Title of the Module Element
103-002-01	Financial Statement Analysis
103-002-02	Bond Analysis
103-002-03	Equity Analysis



## Description of the Module Element

<b>Code</b> 103-002-01	<b>Title of the Module Element</b> Financial Statement Analysis
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## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>1. describe in their own words the essence of an analyzed company</li> <li>2. evaluate and give an objective opinion on a company's performance</li> <li>3. discuss their findings in comparison to industry peers</li> </ol> <p>With respect to acquired skills, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>4. independently fill in a spread sheet for analysis using financial statements</li> <li>5. structure their thoughts to write an in-depth broker report</li> <li>6. present and discuss the conclusions in front of an professional audience</li> </ol> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>7. apply financial statement analysis knowledge</li> <li>8. differentiate various methods in a suitable and effective way</li> <li>9. create and implement new spread sheets for analysing different tasks</li> </ol>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <p>Content</p> <ol style="list-style-type: none"> <li>1. The Annual Report as the Basis for Analysis             <ol style="list-style-type: none"> <li>1.1. What a company is and what it does                 <ol style="list-style-type: none"> <li>1.1.1. Financial statement as a reflection / mirror of different processes</li> <li>1.1.2. Entrepreneurial risks affecting the company</li> <li>1.1.3. Aim in FSA</li> <li>1.1.4. The Importance of the capital structure in finance</li> </ol> </li> <li>1.2. Information Content of the Annual Report                 <ol style="list-style-type: none"> <li>1.2.1. The annual report as the basis</li> <li>1.2.2. Information disclosures and specific interests</li> <li>1.2.3. Reliability of financial statements</li> </ol> </li> <li>1.3. Important Positions in FSA</li> </ol> </li> <li>2. Methods of FSA and Credit Risk Analysis             <ol style="list-style-type: none"> <li>2.1. Evidence in financial ratios</li> <li>2.2. Systematic approaches to CRA</li> </ol> </li> </ol>			

2.3. Evaluation of methods

3. Summary and Conclusions

Case Content

Small groups will prepare an independent FSA within a specific industry and cooperate in a peer group analysis. A final PPT-presentation (10 min.) of their elaborations on specific companies will take place in front of experienced business professionals.

**Teaching Forms**

Lectures and Practicals

**Teaching Methods**

Lectures, discussions, exercises, case studies, group work, presentations, project work

**Literature/Learning Materials**

Leopold A. Bernstein/John J. Wild, Analysis of Financial Statements, McGraw-Hill, 5th ed. 2000, New York, NY

Karl Born, Bilanzanalyse international, Schäffer-Poeschel, 2. Aufl. 2001, Stuttgart

Richard A. Brealey / Stewart C. Myers / Alan J. Marcus, Fundamentals of Corporate Finance, McGraw-Hill, 3rded. 2001, Boston

Alan C. Shapiro / Sheldon D. Balbirer, Modern Corporate Finance, Prentice Hall, 2000, Upper Saddle River, NJ

Karsten Fuser, Intelligentes Scoring und Rating, Gabler, 1. Aufl. 2001, Wiesbaden

Karlheinz Küting / Claus-Peter Weber, Die Bilanzanalyse, Schäffer-Poeschel, 5. Aufl. 2000, Stuttgart

Lawrence Revsine / Daniel W. Collins / W. Bruce Johnson, Financial Reporting & Analysis, Prentice Hall, 2nd ed. 2002, Upper Saddle River, NJ

and further advised readings in lecture

Other sources: Google, Wikipedia, Handelsblatt, Financial Times

Additionally: Students will receive an Excel template for FSA, a Word Document to provide for an analysis structure to write a short broker report on a company in preparation of the final presentation in front of business professionals.

**Specifics**

Flipchart, Blackboard, Overhead Projector, PowerPoint-presentations, Live-simulations, Excel and Word sheets for individual work

**Organization of Course**

Weekly Attendance	Division into Groups	Recommended Semester	Language
2,00	ja		Englisch

		1 Semester	
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b> 103-002-02	<b>Title of the Module Element</b> Bond Analysis
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## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. explain the features of different bond types
2. summarize the real world factors that influence the price of bonds
3. describe the difference between spot and forward interest rates
4. describe different risk measures for bonds
5. explain and compare different bond strategies

With respect to acquired skills, students shall be able to do the following:

1. apply basic mathematical approaches for bond valuation
2. interpret different risk measures of bonds such as duration and convexity
3. implement different bond strategies
4. classify bond strategies with respect to their risk

With respect to acquired competencies, students shall be able to do the following:

1. evaluate and analyze the inherent risk of bonds
2. apply bond analysis knowledge to solve complex problems in portfolio and risk management
3. analyze investment restrictions and apply suitable bond strategies

Wissen	Knowledge	Skills	Competencies
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### Content

1. Bonds
  - Features of a Bond
  - Valuation
  - Real World Factors
2. Risk Measures
  - Duration
  - Convexity
3. Bond Strategies

<ul style="list-style-type: none"> <li>• Cash Flow Matching</li> <li>• Barbell Strategy</li> <li>• Duration Matching</li> <li>• Duration-gap Analysis</li> <li>• Riding the Yield Curve</li> <li>• Arbitrage Strategies</li> </ul>
<p><b>Teaching Forms</b> Lectures and Practicals</p>
<p><b>Teaching Methods</b> Lectures, lectures with exercises</p>
<p><b>Literature/Learning Materials</b> Fabozzi: Bond Markets, Analysis and Strategies, Prentice Hall International Bodie/Kane/Marcus: Investments, McGraw-Hill Arnold: Corporate Financial Management, Prentice Hall Ross/Westerfield/Jordan: Fundamentals of Corporate Finance, Irwin McGraw-Hill</p>
<p><b>Specifics</b> PowerPoint-presentations, Excel sheets for downloading</p>

### Organization of Course

<p><b>Weekly Attendance</b> 2,00</p>	<p><b>Division into Groups</b> ja</p>	<p><b>Recommended Semester</b> 1 Semester</p>	<p><b>Language</b> Englisch</p>
<p><b>Attendance / Contact Hours</b> 22,5 Std.</p>	<p><b>Preparation/Homework/Self-Study</b></p>		<p><b>Time for Exercises/ Group Work</b></p>

## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-002-03	Equity Analysis

## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>1. describe the essential tools necessary for the job of an equity analyst, including capital market concepts, financial statement analysis, financial planning and valuation methods</li> <li>2. describe the main steps in financial planning and in corporate valuation</li> <li>3. understand the top down (economy-industry-company) approach to financial planning and forecasting</li> <li>4. discuss differences between discounted cash flow based models and relative valuations as well as advantages and disadvantages of these approaches</li> <li>5. explain one-stage and multiple-stage valuation models</li> <li>6. explain advantages and disadvantages of relative valuation approaches</li> <li>7. list and explain the impact of the most relevant macroeconomic drivers of corporate valuation</li> </ol> <p>With respect to acquired skills, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>8. Be able to consistently derive a forecast of a company's future financial statements based on an analysis of reported financial data and on assumptions regarding macroeconomic conditions, industry structure, competition, etc.</li> <li>9. apply one-stage and multiple-stage discounted cash flow models</li> <li>10. construct risk-adjusted discount rates</li> <li>11. use earnings-based, book value-based, revenue-based and sector specific multiples to perform a relative valuation of a company</li> <li>12. derive theoretically justified multipliers based on company fundamentals</li> <li>13. implement planning and valuation procedures in spreadsheet models</li> <li>14. analyze the expected impact of macroeconomic factors on corporate valuations</li> </ol> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>15. independently perform an analysis and valuation of a potential equity investment</li> <li>16. identify the key drivers of the valuation of a company</li> <li>17. systematically derive an investment or disposal recommendation</li> <li>18. analyze and challenge proposals developed by others and identify the key drivers leading to the given investment recommendation</li> </ol>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <ol style="list-style-type: none"> <li>1. The Purpose of Equity Analysis</li> <li>2. Financial Statement Analysis             <ol style="list-style-type: none"> <li>2.1. The basics: financial analysis as a prerequisite for financial planning</li> </ol> </li> </ol>			

## 2.2. Liquidity

## 2.3. Operating performance

## 2.4. Risk analysis

## 2.5. Adjustments to corporate accounts

## 2.6. Derivation of free cash flow (FCF)

## 3. Financial Planning and Forecasting

### 3.1. Technical aspects of the planning process

- top-down planning
- closed-loop planning using spreadsheet models

### 3.2. Industry analysis and sales planning

- Determinants of industry unit sales and price levels
- The industry life cycle
- Competition analysis

### 3.3. External factors and longer-term growth

- External factors affecting longer-term growth perspectives
- Modelling consistent long-term growth estimates: the DuPont system

## 4. Valuation

### 4.1. Valuation approaches

### 4.2. Discounted cash flow valuation

- one-stage, two-stage, three-stage models
- approaches to modelling the terminal value
- comparison of dividend-discount, FCF-to-equity, and FCF-to-firm models
- determining the discount rate

### 4.3. Relative valuation

- Earnings-based, book value-based, revenue based, and sector specific multiples
- Definitional, descriptive, analytical and application tests of multiples

## 5. Macroeconomic Aspects of Equity Analysis

### 5.1. Business cycle and asset allocation

### 5.2. Impact of macroeconomic factors on stock prices

### **Teaching Forms**

Lectures and Practicals

### **Teaching Methods**

Lectures, discussions, exercises, case studies, group work
<b>Literature/Learning Materials</b> <ul style="list-style-type: none"> <li>· Brown, Keith C., Reilly, Frank K. (2009): Analysis of Investments and Management of Portfolios, 9th edition, South-Western</li> <li>· Damodaran, Aswath (2002): Investment Valuation, 2nd edition, New York: John Wiley</li> <li>· Benninga, Simon (2008): Financial Modelling, 3rd edition, Cambridge: MIT Press</li> </ul>
<b>Specifics</b> PowerPoint-presentations, Excel spreadsheets, Overhead projector

### Organization of Course

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>



## Description of Module

<b>Code</b> 103-005	<b>Title of Module</b> Applied International Corporate Finance
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <p>Students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• Summarize and interpret the reasons and success factors of applied international corporate finance.</li> <li>• Evaluate and analyze motives for corporate acquisitions and corporate disposals and set up appropriate financial acquisition financings.</li> <li>• Recognize practical business challenges in the areas of applied international corporate finance.</li> </ul>
<p><b>Content</b></p> <p>Applied International Corporate Finance:</p> <ul style="list-style-type: none"> <li>• Mergers and Acquisitions</li> <li>• Private Equity &amp; Acquisition Financing</li> <li>• IPO &amp; Investor Relations</li> </ul>
<p><b>Teaching Forms</b></p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	<p>Knowledge, comprehension, skills and competences from following course units:</p> <ul style="list-style-type: none"> <li>• Financial Management</li> <li>• Financial Analysis</li> <li>• Management Skills</li> <li>• Quantitative Finance &amp; Econometrics</li> </ul>
<b>Preparation for the Module</b>	Pre-reading of the recommended literature

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	<p>Students can apply acquired knowledge, skills and competencies in the following courses:</p> <ul style="list-style-type: none"> <li>• Financial Management</li> <li>• Financial Analysis</li> <li>• Management Skills</li> <li>• Equity Capital Markets &amp; Alternative Investments</li> <li>• Applied Quantitative Corporate Finance</li> <li>• Portfolio Management &amp; Risk Management</li> <li>• Derivatives &amp; Financial Engineering</li> </ul> <p>All other programs in Finance and Business Administration</p>
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<b>Relevance to other Study Courses</b>	
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### Contribution of the Module to Sustainable Development

<p><b>Content</b></p> <p>Applied international corporate finance shows which growth strategies exist and how companies finance their expansion plans. Growth provides chances, but also contains substantial risks. Sustainable development of companies requires a sustainable financing with equity and debt in order to reduce the risks of a hazardous expansion.</p>
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### Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Klausur (120 Minuten)	83 %
Referat/Präsentation ( keine Einheit gewählt)	17 %

### Organization of Course

<b>Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b>		
<b>Type of Module</b> Pflicht	<b>Recurrence</b> jedes Sommersemester	<b>Duration</b> 1 Semester
<b>Admission Criteria</b> none	<b>ECTS Points</b> 7,00	<b>Weekly Attendance</b> 6,00
<b>Workload</b> 7,00 x 25 Stunden = 175,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b> 67,5 Std. / 38,6 %	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

### Content Structure

Code	Title of the Module Element
103-005-01	Mergers & Acquisitions
103-005-02	Private Equity & Acquisition Financing
103-005-03	Legal Structuring of Corporate Finance Transactions

## Description of the Module Element

Code	Title of the Module Element
103-005-01	Mergers & Acquisitions

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. Explain the main differences between mergers and acquisitions.
2. Summarize and interpret the reasons and success factors of M&A.
3. Give an overview of the main milestones of the M&A process.
4. Derive main ideas of business alliances as alternatives to M&A.
5. Set M&A in relation to other corporate finance transactions like Going Public and Private Equity.

With respect to acquired skills, students shall be able to do the following:

6. Ultimately be enabled on this basis to act as an M&A adviser in investment banks or corporate M&A departments after finishing their master education.
7. Evaluate and analyze motives for corporate acquisitions and corporate disposals.
8. Implement strategies for corporate acquisitions and corporate disposals applying the above mentioned milestones of the M&A process.
9. Analyze and interpret practical M&A cases and derive conclusions for the business practice independently.
10. Present results of the M&A milestones convincingly.
11. Act as a reliable M&A adviser to the top-management.
12. Have the ability to plan and conduct an M&A process on their own.

With respect to acquired competencies, students shall be able to do the following:

13. Organize complex M&A transactions on a strategic and financial basis.
14. Structure M&A milestone applying adequate legal documents.
15. Recognize practical business challenges in the areas of M&A.
16. Creatively develop a M&A strategy for buyers and sellers of corporate assets and corporate shares.
17. Apply and modify their knowledge to real M&A transactions.
18. Criticize the result of M&A strategies in business practice focussing on the financial risks of M&A.
19. Draw on and make use of adequate sources of financial service information providers like Bloomberg in order to solve these challenges.
20. Combine interdisciplinary knowledge (intercultural and conflict management as well as legal issues) in order to solve integration problems of an acquired entity.
21. Develop alternative solutions for corporate acquisitions and corporate disposals and give recommendations to clients.
22. comprehensively present solutions to clients and defend them in argument

Wissen	Knowledge	Skills	Competencies
<b>Content</b>			
Why Mergers & Acquisitions?			
a. The Term Mergers & Acquisitions			
b. Reasons and Success Factors of M&A			
c. The Process of M&A			
Initial Phase			
a. Pitch			
b. Choice of Process			
c. Candidate Screening and Selection			
d. Advisers			
e. Mandate Letter			
f. Confidentiality Agreement			
Contacting Interested Parties			
a. Documentation			
b. Letter of Intent			
Financial Aspects of M&A			
a. Due Diligence			
b. Valuation			
c. Structuring			
d. Financing			
Legal Aspects in the M&A Sales Process			
a. How a Negotiated Deal Takes Place			
b. Purchase Agreement			
Post-Merger Integration			
a. Key Issues			
b. Integration Planning			
<b>Teaching Forms</b>			
Lectures and Practicals			
<b>Teaching Methods</b>			
Lectures, Discussions, Exercises, Seminar			
<b>Literature/Learning Materials</b>			

- Bruner, R. F. (2004); Applied Mergers&Acquisitions, Hoboken, John Wiley & Sons, Inc.
- DePamphilis, D. (2001), Mergers, Acquisitions, and other Restructuring Activities, San Diego: Academic Press
- Ernst, D., Häcker, J. (2007), Applied International Corporate Finance, Vahlen, Munic
- Weston, J.F., J.A. Siu & B.A. Johnson (2001), Takeovers, Restructuring, and Corporate Governance, 3rd ed., Upper Saddle River, NJ: Prentice Hall

**Specifics**

board, overhead projector, PowerPoint presentations

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch oder Deutsch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

Code	Title of the Module Element
103-005-02	Private Equity & Acquisition Financing

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. Give an overview of private equity financing and acquisition financing.
2. See private equity and acquisition financing in context with other corporate finance transactions like IPO and mergers & acquisitions.
3. Set private equity in relation to equity financing over organized capital markets.
4. Summarize and present the different goals of equity and debt provider.
5. Describe in their own words the most important financial instruments of equity financing, mezzanine financing and debt financing.
6. Derive main ideas of LBO transactions.
7. Ultimately be enabled on this basis to act as a junior in a private equity company and in an acquisition financing department after finishing their master education.

With respect to acquired skills, students shall be able to do the following:

8. Have the ability to plan, conduct, finance and monitor an investment of a private equity company.
9. Implement strategies for funding and organising a private equity company.
10. Be able to analyze and identify promising investment opportunities and derive conclusions for the private equity company independently.
11. Demonstrate how LBOs can be financed by debt.
12. Present results of the investment process convincingly.
13. Act as a reliable support and private equity manager to the top-management.

With respect to acquired competencies, students shall be able to do the following:

14. Structure private equity investments from a financial, tax and legal perspective.
15. Organize the investment process and exit based on a medium-term strategy.
16. Recognize practical business challenges when financing companies by equity.
17. Creatively develop an IPO strategy for issuers.
18. Apply and modify their knowledge to real investment opportunities of private equity companies.
19. Criticize the business ethics of financial investors focussing on their medium-term investment horizon.
20. Value investment opportunities using specific valuation methods like multiples approach and IRR approach.
21. Draw on and make use of adequate sources of banks in order to set up acquisitions financing models..
22. Develop alternative financial models for companies looking for a private equity and debt financing.

23. Comprehensively present different financial concepts to clients and defend them in argument.

Wissen	Knowledge	Skills	Competencies
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**Content**

Part 1: Private Equity

What is private equity all about?

- a. Definitions
- b. Case Study: Private Equity Ltd. acquires Packaging Group
- c. Motives for private equity financing
- d. Types of investments

Who drives private equity? Bidder groups for equity capital  
The role of banks in the private equity business  
Investors in private equity

How are private equity companies organised? Separation of fund and management  
Subsidiaries  
Management-, control- and advisory organs  
Inner organisation

Investment contract  
Basic types and significant parts of the contract  
Adoption of existing contracts, important side contracts and covenants  
Project-oriented milestones  
Participation in advisory and control organs

How is private equity done? Milestones of a private equity process  
Organizational milestones  
Project-oriented milestones  
Case Study: Private Equity Ltd. acquires Packaging Group

Part 2: Acquisition Financing

What makes acquisition-financing special?

- a. Definition
- b. The challenges of acquisition financing
- c. Acquisition financing vs. buy-out / buy-in financing

How does acquisition financing work?

- a. Functionality of Leveraged Buy-Outs
- b. Exploiting the Leverage-Effect
- c. Improvement of cash-flows
- d. Improvement of company valuation
- e. Integral parts of successful Leveraged Buy-Outs

How to structure an acquisition

- a. Acquisition financing - structuring the project under company law
- b. Asset-Deal vs. Share-Deal

<p>c. Acquisition financing - structuring the financing tools</p> <p>How to determine the financial structure of an acquisition financing</p> <p>a. Determination of the debt service ability</p> <p>b. Acquisition financing - role of equity capital</p> <p>c. Acquisition financing - role of outside capital</p> <p>d. Mezzanine capital</p> <p>Capital structure and key figures</p>
<p><b>Teaching Forms</b></p> <p>Lectures and Practicals</p>
<p><b>Teaching Methods</b></p> <p>Lectures, Exercises, Discussions, case studies</p>
<p><b>Literature/Learning Materials</b></p> <ul style="list-style-type: none"> <li>· Eilers, S., Koffka, N., Mackensen, M. (2009), Private Equity : Unternehmenskauf, Finanzierung, Restrukturierung, Exitstrategien</li> <li>· Feldhaus, H.-G., Veith, A. (2010), Frankfurter Kommentar zum Private Equity : Darstellung der Grundlagen des Private-Equity-Geschäfts und Kommentierung des UBGG und des WKBG</li> <li>· Beisel, W., Klumpp, H.-H. (2009), Der Unternehmenskauf : Gesamtdarstellung der zivil- und steuerrechtlichen Vorgänge einschließlich gesellschafts-, arbeits- und kartellrechtlicher Fragen bei der Übertragung eines Unternehmens</li> <li>· Holzapfel, H. J., Pöllath, R. (2008), Unternehmenskauf in Recht und Praxis : Rechtliche und steuerliche Aspekte</li> </ul>
<p><b>Specifics</b></p> <p>Board, overhead projector, PowerPoint presentations</p>

**Organization of Course**

<p><b>Weekly Attendance</b></p> <p>2,00</p>	<p><b>Division into Groups</b></p> <p>nein</p>	<p><b>Recommended Semester</b></p> <p>2 Semester</p>	<p><b>Language</b></p> <p>Englisch oder Deutsch</p>
<p><b>Attendance / Contact Hours</b></p> <p>22,5 Std.</p>	<p><b>Preparation/Homework/Self-Study</b></p>		<p><b>Time for Exercises/ Group Work</b></p>



## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-005-03	Legal Structuring of Corporate Finance Transactions

## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>1. Understand and describe the private-equity business model</li> <li>2. Integrate private equity financing into the various options available for financing a company</li> <li>3. Understand the role of private equity in the overall context of corporate transactions such as going public or strategic M&amp;A</li> <li>4. Understand and evaluate the diverging interests of the parties of a private equity transaction</li> <li>5. Understand and describe the structure of private equity funds</li> <li>6. Understand and describe the objectives of private equity funds and how they operate</li> <li>7. Understand and describe the various phases and timing of a private equity transaction</li> <li>8. Recognize the most important legal provisions required for private equity transactions (does not include ability to draft independently)</li> </ol> <p>With respect to acquired skills, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>9. Recognize and assess the motives of the various parties to a private equity transaction</li> <li>10. Recognize the interests of a private equity investor in a specific private equity transaction and ensure that they are reflected in the transaction structure</li> <li>11. Recognize and take account of the interests of other parties involved in a private equity transaction, in particular the seller and the company concerned</li> <li>12. Identify and describe the potential critical aspects of a private equity transaction and identify ways of reconciling the interests of the parties involved</li> <li>13. Recognize the key legal issues of a private equity transaction</li> <li>14. Recognize and outline the areas to be covered by due diligence</li> <li>15. Assist in structuring a private equity transaction</li> </ol> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>16. Assist in planning and organising the due diligence procedure</li> <li>17. Assist in planning and organising private equity transactions</li> <li>18. Recognize and avoid deal breakers in private equity transactions</li> <li>19. Develop solutions for problem issues</li> <li>20. Recognize and safeguard the risks of private equity investors</li> <li>21. Apply the knowledge acquired in course to private equity transactions in practice</li> </ol>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <ol style="list-style-type: none"> <li>1. General Introduction             <ol style="list-style-type: none"> <li>1.1 Definition Private Equity</li> <li>1.2 Definition Venture Capital and Hedge Funds</li> </ol> </li> </ol>			

1.3 History and Development

1.4 Figures and Statistics

1.5 Locust Discussion

Private Equity Structures

2.1 Parties on the Market

2.2 Forms of Private Equity

2.3 Fund Structuring

2.4 Fundraising

2.5 Deal Flow

2.6 Leverage Effect

Step-by-step Guide to a Private Equity Transaction

3.1 Overview

3.2 Confidentiality agreement

3.3 Letter of intent

3.4 Subject of Due Diligence

3.5 The Due Diligence Review

3.6 Negotiations

3.7 Signing and Closing

3.8 Acquisition-related Restructuring

3.9 Restructuring after Acquisition

3.10 Auctions

Workshop Essential Legal Documentation

5.1 Share Purchase and Transfer Agreement (SPA)

5.2. Articles of Association

5.3 Participation Agreement/Shareholders' Agreement

5.4 Internal Rules for Management

Management Buy-Out (MBO)

6.1 Advantages and Disadvantages of an MBO

6.2 Issues of Management Concern

6.3 Requirements of Private Equity Investor

6.4 Requirements of Management

6.5 Special Issues

<p>ExitReview; Trends in Germany; International Comparison</p> <p>8.1 2009</p> <p>8.2 Outlook</p> <p>8.3 International</p>
<p><b>Teaching Forms</b></p> <p>Lectures and Practicals</p>
<p><b>Teaching Methods</b></p> <p>Lectures, Discussions, Exercises</p>
<p><b>Literature/Learning Materials</b></p> <ul style="list-style-type: none"> <li>· Eilers, S., Koffka, N., Mackensen, M. (2009), Private Equity : Unternehmenskauf, Finanzierung, Restrukturierung, Exitstrategien</li> <li>· Feldhaus, H.-G., Veith, A. (2010), Frankfurter Kommentar zum Private Equity : Darstellung der Grundlagen des Private-Equity-Geschäfts und Kommentierung des UBGG und des WKBG</li> <li>· Beisel, W., Klumpp, H.-H. (2009), Der Unternehmenskauf : Gesamtdarstellung der zivil- und steuerrechtlichen Vorgänge einschließlich gesellschafts-, arbeits- und kartellrechtlicher Fragen bei der Übertragung eines Unternehmens</li> <li>· Holzapfel, H. J., Pöllath, R. (2008), Unternehmenskauf in Recht und Praxis : Rechtliche und steuerliche Aspekte</li> </ul>
<p><b>Specifics</b></p> <p>PowerPoint presentation, handout workshop, handout examples of wordings for certain clauses, board</p>

### Organization of Course

<p><b>Weekly Attendance</b></p> <p>2,00</p>	<p><b>Division into Groups</b></p> <p>nein</p>	<p><b>Recommended Semester</b></p> <p>2 Semester</p>	<p><b>Language</b></p> <p>Englisch oder Deutsch</p>
<p><b>Attendance / Contact Hours</b></p> <p>22,5 Std.</p>	<p><b>Preparation/Homework/Self-Study</b></p>		<p><b>Time for Exercises/ Group Work</b></p>

## Description of Module

<b>Code</b> 103-006	<b>Title of Module</b> Applied Quantitative Corporate Finance
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <p>Students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• Set company valuation and structured finance in relation to other corporate finance topics like mergers &amp; acquisitions, going public and private equity.</li> <li>• Interpret the results of the company valuation and structured finance and derive conclusions for corporate finance transactions independently.</li> <li>• Apply and combine knowledge and skills from different course units to valuation and structured finance</li> </ul>
<p><b>Content</b></p> <p>Applied Quantitative Corporate Finance:</p> <ol style="list-style-type: none"> <li>1. Practice of Financial Planning and Valuation</li> <li>2. Structured Finance</li> </ol>
<p><b>Teaching Forms</b></p> <p>Seminar,</p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	<p>Knowledge, comprehension, skills and competences from following course units:</p> <p>Quantitative Finance &amp; Econometrics</p>
<b>Preparation for the Module</b>	Pre-reading of the recommended literature.

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	<p>Students can apply acquired knowledge, skills and competencies in the following courses:</p> <ul style="list-style-type: none"> <li>• Financial Management</li> <li>• Financial Analysis</li> <li>• Quantitative Finance &amp; Econometrics</li> <li>• Equity Capital Markets &amp; Alternative Investments</li> <li>• Applied International Corporate Finance</li> <li>• Portfolio Management &amp; Risk Management</li> <li>• Derivatives &amp; Financial Engineering</li> </ul> <p>All other programs in Finance and Business Administration</p>
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

### Content

Applied quantitative finance deals with investment instruments and how to apply structured financial products in order to obtain tailor-made financing. The financial crisis was partially caused by the incautious use of structured products and an overly enthusiastic valuation of investment opportunities. Sustainable development requires in-depth knowledge of valuation techniques and structured products, as well as diligent use of these techniques and products.

## Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Klausur (120 Minuten)	100 %

## Organization of Course

<b>Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b>		
<b>Type of Module</b> Pflicht	<b>Recurrence</b> jedes Sommersemester	<b>Duration</b> 1 Semester
<b>Admission Criteria</b>	<b>ECTS Points</b> 8,00	<b>Weekly Attendance</b> 6,00
<b>Workload</b> 8,00 x 25 Stunden = 200,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b> 67,5 Std. / 33,8 %	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

## Content Structure

Code	Title of the Module Element
103-006-01	Company Valuation
103-006-02	Tutorial: Company Valuation
103-006-03	Structured Finance

## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-006-01	Company Valuation

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. Give an overview of the main valuation methods
2. Set company valuation in relation to other corporate finance topics like Mergers & Acquisitions, Going Public and Private Equity.
3. Relate corporate planning to corporate valuation and to describe the linkages in their own words.

With respect to acquired skills, students shall be able to do the following:

1. critically evaluate the results of the corporate valuation and to clarify any differences.
2. interpret the results of the corporate valuation and to independently draw conclusions for corporate finance transactions.
3. review the structure of the valuation model and the results of the corporate valuation with the help of a model review.

With respect to acquired competencies, students shall be able to do the following:

1. transfer the results from the corporate valuation to other modules such as financial management, portfolio management and derivatives and to combine them with these modules.
2. master theoretical and empirical challenges of corporate valuation.
3. apply their knowledge to specific valuation projects and to adjust it to actual valuation situations.
4. critically challenge the assumptions, algorithms and results of every valuation approach.
5. present and defend the valuation results in front of clients.

Wissen	Knowledge	Skills	Competencies
Fach	X	X	X
System	X	X	
Selbst	X	X	X
Sozial	X	X	

### Content

In the class "Company Valuation" students forecast and value a DAX listed company.

Overview of the Methods of Company Valuation

- 2. Company Valuation using Discounted Cash Flow Models
  - 2.1 Basics of Corporate Planning
    - 2.1.1 Planning Period
    - 2.1.2 Planning Premises or Structure of Planning in the Model
  - 2.2 WACC Approach
    - 2.2.1 The Idea behind the WACC Approach
    - 2.2.2 Calculating the Operative Free Cash Flows
    - 2.2.3 Determining the Cost of Capital
    - 2.2.4 Calculation of the Company Value
  - 2.3 Period-specific WACC Approach
  - 2.4 APV Approach
    - 2.4.1 The Rational for the APV Approach
    - 2.4.2 Calculating the Operative Free Cash Flows
    - 2.4.3 Determining the Cost of Capital
    - 2.4.4 Calculation of the Company Value
  - 2.5 Equity Approach
    - 2.5.1 The Structure of the Equity Approach
    - 2.5.2 Calculating the Cash Flow to Equity
    - 2.5.3 Determining the Cost of Capital
    - 2.5.4 Calculation of the Company Value
  - 2.6 Sensitivity Analysis
  - 2.7 Scenario Analysis
    - 2.7.1 Scenario Analysis with the Excel Scenario Manager
    - 2.7.2 Scenario Analysis without the Excel Scenario Manager
  - 2.8 Corporate Valuation for Professionals
    - 2.8.1 Financing Assumptions
    - 2.8.2 Calculating the Cost of Capital
      - 2.8.2.1 Determining the Cost of Equity
      - 2.8.2.2 Determining the Cost of Debt Capital
      - 2.8.2.3 Calculating the WACC
    - 2.8.3 Calculating the Company Value

3. Company Valuation using Market Capitalization and Book Value

3.1 Overview of Market Capitalization

3.2 Overview of Book Value

3.3 Valuation Process using Market Capitalization and Book Value

3.3.1 Obtaining the Required Data

3.3.2 Calculating the Market Capitalization

3.3.3 Calculating the Book Value

4. Stock Market Multiples

4.1 Overview of Stock Market Multiples

4.2 Valuation Process with Stock Market Multiples

4.2.1 Derivation of the Peer Group

4.2.2 Selection of Appropriate Multiples

4.2.3 Collection of the Required Data

4.2.4 Calculation of the Stock Market Multiples

4.2.5 Application of the Stock Market Multiples to the Target Company

5. Transaction Multiples

5.1 Overview of Transaction Multiples

5.2 Comparison of Stock Market and Transaction Multiples

5.3 Valuation Process with Transaction Multiples

5.3.1 Selection from the Database

5.3.2 Narrowing Down the Selection in Excel

5.3.3 Calculating the Transaction Multiples

5.3.4 Application of the Transaction Multiples to the Target Company

5.4 The Football Field Graph

5.4.1 Application of the Football Field Graph

5.4.2 The Modeling Process in Three Steps

**Teaching Forms**

Lectures and Practicals

**Teaching Methods**



Lectures, Discussions, Exercises

**Literature/Learning Materials**

Agar, C. (2005) *Capital investment & financing: a practical guide to financial evaluation*, 1st edn (Butterworth-Heinemann: Oxford).

Baker, M.P., Ruback, R.S. (1999) *Estimating Industry Multiples*, (Harvard University).

Damodaran, A. (2013) *A tangled web of values: Enterprise value, Firm Value and Market Cap* (Working paper: New York).

Damodaran, A. (2009) *The Dark Side of Valuation: Valuing Young, Distressed, and Complex Businesses*, 2nd edn (New Jersey: Financial Times Prentice Hall).

Damodaran, A. (2002) *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, 2nd edn (New York: Wiley).

Damodaran, A. (1999) *The Dark Side of Valuation: Firms with no Earnings, no History and no Comparables*, Department of Finance, Leonard N. Stern School of Business, New York University (New York: FT Press).

Devlin, W., Patwardhan, D. (2013) *Measuring market inflation expectations*, Australian Treasury Department.

Ernst D., Häcker J. (2017, editors) *Financial Modeling - An Introductory Guide to Excel and VBA Applications in Finance* 1st edition, (Basingstoke (England) and New York (US): Palgrave Macmillan).

Ernst, D., Häcker, J. (2011) *Applied International Corporate Finance*, 2nd edn (Munich: Vahlen Publisher).

Fama, E.F. (1970) *Efficient Capital Markets: A Review of Theory and Empirical Work*, in *Journal of Finance*, 25(2), pp. 383-417.

Hanouna, P., Sarin, A., Shapiro, A. C. (2001) *Value of Control: Some International Evidence*, in: USC Marshall School of Business, Working Paper No. 01-4.

Herrmann, V., Richter, F. (2003) *Pricing with performance-controlled Multiples*, in *Schmalenbach Business Review*, 55, pp. 194-219.

Jensen, M. C., Ruback, R. S. (1983) *The market for Corporate Control: The Scientific Evidence*, in *Journal of Financial Economics* 11, pp. 5-50.

J.P.Morgan Cazenove (2013) *European Pharmaceuticals*, January 3, 2013 (via Thomson Reuters).

Kaplan, S., Ruback, R. (1995) *The Valuation of Cash Flow Forecasts: An Empirical Analysis*, in *The Journal of Finance*, 50(4), pp. 1059-1093.

Kim, M., Ritter, J.R. (1999) *Valuing IPOs*, in *Journal of Financial Economics*, 53, pp. 409-437.

Koller, T., Goedhardt, M., Wessels, D. (2010) *Valuation: Measuring and Managing the Value of Companies*,

5th edition, (New Jersey: John Wiley & Sons).

Lease, R., McConnell, J. J., Mikkelson, W. H. (1984) *The Market of Value Control in Publicly Traded Corporations*, in: *Journal of Financial Economics* 57, pp. 443-468.

McConnell, J. J., Servaes, H. (1990) *Additional Evidence on Equity ownership and Corporate Value*, in *Journal of Financial Economics* 27, pp. 595-612.

Pettit, B.S., Ferris, K.R. (2013) *Valuation for Mergers and Acquisitions*, 2nd edn, (New Jersey: Pearson Education).

Pratt, S. (2008) *Valuing a Business*, McGraw-Hill.

Rosenbaum, J., Pearl, J. (2013) *Investment Banking: Valuation, Leveraged Buyouts, and Mergers & Acquisitions*, 2nd edn (New Jersey: John Wiley & Sons).

Rotkowsky, A., Clough, E. (2013) *How to Estimate the Long-Term Growth Rate in the Discounted Cash Flow Method*, (Willamette: Forensic Analysis Insights - Business Valuation, 9-20).

SIC Website:<http://www.osha.gov/pls/imis/sicsearch.html>

Tjia, J. (2009) *Building financial models, the complete guide to designing, building, and applying projection models*, 2nd edition (New York: McGraw-Hill).

Trugman, G. (2008) *Understanding Business Valuation*, 3rd edn (New York: American Institute of Certified Public Accountants).

**Specifics**  
Laptops, beamer, board, overhead projector, MS Excel, MS PowerPoint

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch oder Deutsch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b> 103-006-02	<b>Title of the Module Element</b> Tutorial: Company Valuation
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## Content Structure

### Qualification Goals

With respect to acquired skills, students shall be able to do the following:

1. use their knowledge about planning and valuation methods to develop a professional standard model for corporate valuation which incorporates the principles of financial modeling.
2. obtain the data necessary for a corporate valuation from information providers such as Bloomberg or Thomson Reuters and to process the data.
3. independently structure complex tasks in corporate valuation and to develop independent modules to solve these tasks.

With respect to acquired competencies, students shall be able to do the following:

1. manage a project in the field of corporate valuation and to develop proprietary solutions in a team of valuation experts.
2. compile a transparent and comprehensive documentation of assumptions and methods for a given valuation project.
3. structure the process of corporate valuation and to apply the standards of professional financial modeling.
4. master theoretical and empirical challenges of corporate valuation.

Wissen	Knowledge	Skills	Competencies
Fach	X	X	X
System	X	X	
Selbst	X	X	X
Sozial	X	X	

### Content

In the class "Company Valuation" students forecast and value a DAX listed company.

#### Overview of the Methods of Company Valuation

2. Company Valuation using Discounted Cash Flow Models
  - 2.1 Basics of Corporate Planning
    - 2.1.1 Planning Period
    - 2.1.2 Planning Premises or Structure of Planning in the Model

- 2.2 WACC Approach
  - 2.2.1 The Idea behind the WACC Approach
  - 2.2.2 Calculating the Operative Free Cash Flows
  - 2.2.3 Determining the Cost of Capital
  - 2.2.4 Calculation of the Company Value
- 2.3 Period-specific WACC Approach
- 2.4 APV Approach
  - 2.4.1 The Rational for the APV Approach
  - 2.4.2 Calculating the Operative Free Cash Flows
  - 2.4.3 Determining the Cost of Capital
  - 2.4.4 Calculation of the Company Value
- 2.5 Equity Approach
  - 2.5.1 The Structure of the Equity Approach
  - 2.5.2 Calculating the Cash Flow to Equity
  - 2.5.3 Determining the Cost of Capital
  - 2.5.4 Calculation of the Company Value
- 2.6 Sensitivity Analysis
- 2.7 Scenario Analysis
  - 2.7.1 Scenario Analysis with the Excel Scenario Manager
  - 2.7.2 Scenario Analysis without the Excel Scenario Manager
- 2.8 Corporate Valuation for Professionals
  - 2.8.1 Financing Assumptions
  - 2.8.2 Calculating the Cost of Capital
    - 2.8.2.1 Determining the Cost of Equity
    - 2.8.2.2 Determining the Cost of Debt Capital
    - 2.8.2.3 Calculating the WACC
  - 2.8.3 Calculating the Company Value
- 3. Company Valuation using Market Capitalization and Book Value
  - 3.1 Overview of Market Capitalization
  - 3.2 Overview of Book Value
  - 3.3 Valuation Process using Market Capitalization and Book Value

- 3.3.1 Obtaining the Required Data
- 3.3.2 Calculating the Market Capitalization
- 3.3.3 Calculating the Book Value
  
- 4. Stock Market Multiples
  - 4.1 Overview of Stock Market Multiples
  - 4.2 Valuation Process with Stock Market Multiples
    - 4.2.1 Derivation of the Peer Group
    - 4.2.2 Selection of Appropriate Multiples
    - 4.2.3 Collection of the Required Data
    - 4.2.4 Calculation of the Stock Market Multiples
    - 4.2.5 Application of the Stock Market Multiples to the Target Company
  
- 5. Transaction Multiples
  - 5.1 Overview of Transaction Multiples
  - 5.2 Comparison of Stock Market and Transaction Multiples
  - 5.3 Valuation Process with Transaction Multiples
    - 5.3.1 Selection from the Database
    - 5.3.2 Narrowing Down the Selection in Excel
    - 5.3.3 Calculating the Transaction Multiples
    - 5.3.4 Application of the Transaction Multiples to the Target Company
  - 5.4 The Football Field Graph
    - 5.4.1 Application of the Football Field Graph
    - 5.4.2 The Modeling Process in Three Steps

#### **Teaching Forms**

#### **Teaching Methods**

Lectures, Discussions, Exercises

#### **Literature/Learning Materials**

##### **Literature /Learning Materials**

Agar, C. (2005) *Capital investment & financing: a practical guide to financial evaluation*, 1st edn (Butterworth-Heinemann: Oxford).

Baker, M.P., Ruback, R.S. (1999) *Estimating Industry Multiples*, (Harvard University).

- Damodaran, A. (2013) *A tangled web of values: Enterprise value, Firm Value and Market Cap* (Working paper: New York).
- Damodaran, A. (2009) *The Dark Side of Valuation: Valuing Young, Distressed, and Complex Businesses*, 2nd edn (New Jersey: Financial Times Prentice Hall).
- Damodaran, A. (2002) *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, 2nd edn (New York: Wiley).
- Damodaran, A. (1999) *The Dark Side of Valuation: Firms with no Earnings, no History and no Comparables*, Department of Finance, Leonard N. Stern School of Business, New York University (New York: FT Press).
- Devlin, W., Patwardhan, D. (2013) *Measuring market inflation expectations*, Australian Treasury Department.
- Ernst D., Häcker J. (2017, editors) *Financial Modeling - An Introductory Guide to Excel and VBA Applications in Finance* 1st edition, (Basingstoke (England) and New York (US): Palgrave Macmillan).
- Ernst, D., Häcker, J. (2011) *Applied International Corporate Finance*, 2nd edn (Munich: Vahlen Publisher).
- Fama, E.F. (1970) *Efficient Capital Markets: A Review of Theory and Empirical Work*, in *Journal of Finance*, 25(2), pp. 383-417.
- Hanouna, P., Sarin, A., Shapiro, A. C. (2001) *Value of Control: Some International Evidence*, in: USC Marshall School of Business, Working Paper No. 01-4.
- Herrmann, V., Richter, F. (2003) *Pricing with performance-controlled Multiples*, in *Schmalenbach Business Review*, 55, pp. 194-219.
- Jensen, M. C., Ruback, R. S. (1983) *The market for Corporate Control: The Scientific Evidence*, in *Journal of Financial Economics* 11, pp. 5-50.
- J.P.Morgan Cazenove (2013) *European Pharmaceuticals*, January 3, 2013 (via Thomson Reuters).
- Kaplan, S., Ruback, R. (1995) *The Valuation of Cash Flow Forecasts: An Empirical Analysis*, in *The Journal of Finance*, 50(4), pp. 1059-1093.
- Kim, M., Ritter, J.R. (1999) *Valuing IPOs*, in *Journal of Financial Economics*, 53, pp. 409-437.
- Koller, T., Goedhardt, M., Wessels, D. (2010) *Valuation: Measuring and Managing the Value of Companies*, 5th edition, (New Jersey: John Wiley & Sons).
- Lease, R., McConnell, J. J., Mikkelson, W. H. (1984) *The Market of Value Control in Publicly Traded Corporations*, in: *Journal of Financial Economics* 57, pp. 443-468.
- McConnell, J. J., Servaes, H. (1990) *Additional Evidence on Equity ownership and Corporate Value*, in *Journal of Financial Economics* 27, pp. 595-612.

Petitt, B.S., Ferris, K.R. (2013) *Valuation for Mergers and Acquisitions*, 2nd edn, (New Jersey: Pearson Education).

Pratt, S. (2008) *Valuing a Business*, McGraw-Hill.

Rosenbaum, J., Pearl, J. (2013) *Investment Banking: Valuation, Leveraged Buyouts, and Mergers & Acquisitions*, 2nd edn (New Jersey: John Wiley & Sons).

Rotkowsky, A., Clough, E. (2013) *How to Estimate the Long-Term Growth Rate in the Discounted Cash Flow Method*, (Willamette: Forensic Analysis Insights - Business Valuation, 9-20).

SIC Website:<http://www.osha.gov/pls/imis/sicsearch.html>

Tjia, J. (2009) *Building financial models, the complete guide to designing, building, and applying projection models*, 2nd edition (New York: McGraw-Hill).

Trugman, G. (2008) *Understanding Business Valuation*, 3rd edn (New York: American Institute of Certified Public Accountants).

**Specifics**

Laptops, beamer, board, overhead projector, MS Excel, MS PowerPoint

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-006-03	Structured Finance

## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>1. explain the finance industry's drive for innovation</li> <li>2. summarize and describe the foundation of financial engineering and synthetic product innovations</li> <li>3. identify the relevant questions in prudent product engineering</li> </ol> <p>With respect to acquired skills, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>4. analyze alternative risk transformation products und cash flow structures like ABS, CDO, Credit Derivatives, Weather Derivatives, CatBonds and others</li> <li>5. have the ability to plan and carry out suitable testing of financing structures</li> <li>6. formulate and critically asses future projections</li> </ol> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>7. adequately assess situations in counterparty risk</li> <li>8. apply knowledge in order to adequately review fair pricing of the transaction</li> <li>9. investigate in internet on short notice and identify adequate solutions</li> </ol>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <p><b>The Cash flow and future information, a reliable base for all products?</b></p> <p>The Liquidity Gap and Cash Flow, what could we do without? The universe of financing and innovation there in Structures and correlations shape the portfolio The example of weather. How cash flows are how affected</p> <p><b>Future and Information, what do we really know?</b></p> <p>History, innovation and invention. Patterns of change Methods of forecasting, how planable is the future? The four dimensions of uncertainty in scientific forecasts</p> <p><b>Risk and Mitigation, because return is only half of the equation.</b></p> <p>Risk, what about Risks? The risk management process About mapping risks and mitigation The leverage effect - some add on to the game</p> <p><b>Rating, the right way of understanding the future?</b></p> <p>Rating is unequal rating. Do they all contain future information?</p>			



From cash flow to probability of default, the process of aggregation to rating  
Rating versus early warning system, can they cover both?

### **Pricing and Information. How do we get the right bet?**

The potpourri of pricing, an “easy” formula to start out with  
Choosing the right risk distribution  
Expected and unexpected losses, what do they tell us?  
VaR and sharpe ratio, are they of any help?

### **Asset swaps and Credit Derivatives, the nucleus in structuring!**

#### **The universe of structured products. From single investments to synthetic portfolios.**

Instruments in credit risk transfer  
ART – The markets grow together

#### **Legal aspects, tranches and the right cash flows determine the mapping of risks.**

ISDA, the source for liquidity in markets  
Not to forget counterparty risk  
Tranches, the result from modeling the cash flows and risk distribution  
Getting the prices right

#### **Credit Default Swaps (CDS). A reminder: are they really Derivatives? ABS structures. Take some more risk to reduce risk! Collateralized Debt Obligation (CDO). Do you want it a bit more synthetic? Certificates - What will be the next innovation? Index and Index Trading. What will be the next innovation?**

Individual products will be evaluated with special interest to  
- the originators position  
- the investors position  
- the arrangers position

Throughout the lecture students will prepare so called **WIKI-Exercises**. They will voluntarily prepare a short presentation of specific termini in finance on the basis of their internet research as well as guide a thorough and in-depth discussion.

#### **Teaching Forms**

Seminar, Lectures and Practicals,

#### **Teaching Methods**

Lectures, Discussions, Presentations, Project work

#### **Literature/Learning Materials**

- Culp, Christopher L. (2003) The Art of Risk Management John Wiley & Sons
- Bartelt, Niklas (1999) Asset-Backed Securities, Gabler
- Choudry, Moorad (2004) Structured Credit Products, Credit Derivatives and Synthetic Securitisation, John Wiley & Sons
- and further literature recommended in lecture.
- Other sources: Google, Wikipedia, Handelsblatt, Financial Times

**Specifics**

Lectures, Discussions, Presentations, Project work.

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch oder Deutsch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of Module

<b>Code</b> 103-003	<b>Title of Module</b> Management Skills
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <p>Students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• Recognize intercultural management and conflict management as an influential parameter in companies and organizations.</li> <li>• Act and react sensible and with appropriate sensitivity in groups, meetings, and 1:1 talks with managers and employees, also concerning gender, ethnic background, or other diversity criteria.</li> <li>• Apply international management knowledge to develop skills and operational abilities to manage intercultural conflict appropriately, effectively, satisfactorily and productively.</li> </ul>
<p><b>Content</b></p> <p>Management Skills</p> <ul style="list-style-type: none"> <li>• Strategic Management</li> <li>• Intercultural Management</li> <li>• Conflict Management</li> </ul>
<p><b>Teaching Forms</b></p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	Knowledge, comprehension, skills and competences from the first study. Willingness and curiosity to ask questions and to discuss topics with general arguments as well as with personal opinions and experience.
<b>Preparation for the Module</b>	Pre-reading of the recommended literature, preparation of sessions with given literature

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	<p>Students can apply acquired knowledge, skills and competencies in following other courses:</p> <ul style="list-style-type: none"> <li>• Financial Management</li> <li>• Applied International Corporate Finance</li> <li>• Applied Quantitative Corporate Finance</li> <li>• Portfolio Management &amp; Risk Management</li> <li>• Derivatives &amp; Financial Engineering</li> </ul>
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	All other programs in Finance and Business Administration
<b>Relevance to other Study Courses</b>	

### Contribution of the Module to Sustainable Development

<p><b>Content</b></p> <p>Management skills are the basis for responsible and sustainable management decisions. Social sustainability in companies is one of the key success factors in a knowledge and technology driven society and can be regarded as a source for sustainable HR development programs and innovation processes. Especially in an international context, intercultural management and conflict management contribute to the long-term success of a globally operating company. International teams perform successfully when they are aware of the intercultural differences of their team members.</p>
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### Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Referat/Präsentation (0 keine Einheit gewählt)	83 %
Schriftliche Arbeit ( keine Einheit gewählt)	17 %

### Organization of Course

<b>Responsible for Module</b>		
Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b>		
Ms. Vera Naumann; Mr. Matthias Pohl		
<b>Type of Module</b>	<b>Recurrence</b>	<b>Duration</b>
Pflicht	jedes Wintersemester	1 Semester
<b>Admission Criteria</b>	<b>ECTS Points</b>	<b>Weekly Attendance</b>
none	7,00	6,00
<b>Workload</b>		
7,00 x 25 Stunden = 175,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b>	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>
90,0 Std. / 51,4 %		

### Content Structure

Code	Title of the Module Element
103-003-01	Strategic Management
103-003-02	Intercultural Management and Conflict Management
103-003-03	Intercultural Management and Conflict Management

## Description of the Module Element

<b>Code</b> 103-003-01	<b>Title of the Module Element</b> Strategic Management
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## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to:</p> <ul style="list-style-type: none"> <li>• Understand the phases of the strategic management process</li> <li>• Understand the targets of the different phases of the strategic management process</li> <li>• Understand the different tools useable during the different phases of the strategic management process</li> <li>• Understand the main industry drivers and trends of the automotive industry</li> </ul> <p>With respect to acquired skills, students shall be able to:</p> <ul style="list-style-type: none"> <li>• Evaluate and analyse given case examples of company strategies</li> <li>• Implement tools within the strategic management process</li> <li>• Present their results convincingly</li> <li>• Plan and conduct a strategic management project individually and without support</li> </ul> <p>With respect to acquired competencies, students shall be able to:</p> <ul style="list-style-type: none"> <li>• Apply skills developed in the course "Strategic Management"</li> <li>• Structure a strategic management project and implement the single process phases</li> <li>• Discuss and criticize existing strategic management approaches and tools</li> <li>• Comprehensively present their research results in a professional way</li> </ul>			
Wissen	Knowledge	Skills	Competencies
Fach	X	X	
System	X	X	
Selbst	X		
Sozial	X		
<p><b>Content</b></p> <p>The seminar "Strategic Management" comprises the theoretical background of the strategic management process, introduces tools which are used in the single phases of the process, gives case examples and executes group work.</p>			
<p><b>Teaching Forms</b></p>			
<p><b>Teaching Methods</b></p> <p>Lectures, discussions, group work with presentations</p>			
<p><b>Literature/Learning Materials</b></p> <p>Script Literature</p>			
<p><b>Specifics</b></p>			

Board, Beamer

### Organization of Course

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b> 103-003-02	<b>Title of the Module Element</b> Intercultural Management and Conflict Management
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## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. conceptualize management skills as personal skills that can be developed and trained
2. describe various traits and preferences of themselves and other individuals
3. name criteria to describe leadership and communication styles
4. understand psychodynamics of conflicts
5. understand group dynamics of conflicts

With respect to acquired skills, students shall be able to do the following:

1. reflect their individual human resources, assets and personal traits
2. discuss individual preferences in management and communication styles
3. act goal-oriented in communication and conflict situations
4. address conflicts and possible conflicts at an early stage
5. give and receive constructive feedback
6. be aware of, reflect and use their nonverbal communication

With respect to acquired competencies, students shall be able to do the following:

1. distinguish between unfiltered authentic behaviour, selective authenticity, and manipulation
2. make use of management and planning tools in managing their tasks
3. work towards sustainable conflict solutions

present creative ideas for leadership, development and conflict resolution

Wissen	Knowledge	Skills	Competencies
Fach	X	X	X
System	X	X	X
Selbst	X	X	X
Sozial	X	X	X

### Content

Management skills are to a great extent **personal social skills**.

If one's personal experience is **conceptualized** and compared with typical **patterns**, this experience becomes a rich source for one's managerial practice and conflict competence, because it is no longer perceived just as personal and situative, but one can generalize and draw conclusions for other situations to come. These patterns can be **cultural**, they can have to do with **gender** as well as with **group dynamics** or the typical **stages** in groups, or **social systems**. Again, the open and critical awareness towards one's own experience is a necessary foundation

for all theoretical knowledge which can only be applied sensibly if this awareness is developed in the person.

Special tools help to **recognize, analyze and shape one's communication** in a goal-oriented way, starting with personal feedback to an employee or colleague (or receiving such feedback) up to giving directions when assigning a task to a group member. Leadership behaviour mostly consists in verbal communication, such as managing tasks, giving praise or encouraging someone. A manager who senses the fine line between condescending to someone or being an inviting, open minded and encouraging counterpart, will more often pick the **appropriate** tone for a given **person** from a distinct **cultural background** in a certain **situation** with a relevant **context**. The same applies for facilitating and moderating discussions.

### Teaching Forms

Lectures and Practicals

### Teaching Methods

Introductions, discussions, exercises, learning team, case studies, role play, tests, group work, presentations. Students are encouraged to bring in their own personal questions, opinions and arguments.

### Literature/Learning Materials

Christian Rainer Weisbach: Leadership in Professional Conversation. – Beck-Wirtschaftsberater im dtv, 2005.

David Allen: Getting things done. – Penguin Books 2001

Eric Berne: Games People Play: The Psychology of Human Relations. – Originally 1964, many later editions, e. g. Grove Press 1978

Henry Mintzberg: Developing Leaders? Developing Countries? – Oxford Leadership Journal Vol 1.1, March 2010, retrieved on Jan. 20, 2012 from the following source:[http://www.oxfordleadership.com/journal/vol1\\_issue2/mintzberg.pdf](http://www.oxfordleadership.com/journal/vol1_issue2/mintzberg.pdf)

Julia Middleton: Beyond Authority. Leadership in a changing world. – Palgrave Macmillan 2007

Jim Kouzes, Barry Posner: Leadership Practice Inventory:<http://www.leadershipchallenge.com/professionals-section-lpi.aspx>

Jim Kouzes, Barry Posner: Leadership Challenge. The leadership practices inventory. – San Francisco 2007

Reinhard Sprenger: Trust. The Best Way to Manage. – Campus, Frankfurt, New York 2007

Sheryl Sandberg: Lean in. Women, work, and the will to lead. – New York, 2013

Carl R. Rogers: On Becoming a Person. A Therapist's View of Psychotherapy. – Boston 1961 (p. 183-196)

Walter Isaacson: Steve Jobs. – New York, 2011



Pavan Sukhdev: Corporation 2020. Transforming business for tomorrow's world. – Washington, DC 2012. (p. 6-7: Corporation 1920, p. 62-63: Exclusions, p. 228-235: The world of Corporation 2020)

Viktor Mayer-Schönberger, Kenneth Cukier: Big Data. A revolution that will transform how we live, work and think. – London, 2013. (p. 64-65: Correlations do not prove causality)

Thomas Piketty: Capital in the 21st century. – Cambridge, Mass. and London, 2014

Paul Mason: Postcapitalism. A guide to our future. – St. Ives, UK 2015

### Specifics

Flipchart, PowerPoint-presentations, photo protocols of all sessions, text excerpts, exercise sheets, PDF-files as text samples

### Organization of Course

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> ja	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-003-03	Intercultural Management and Conflict Management

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. conceptualize management skills as personal skills that can be developed and trained
2. describe various traits and preferences of themselves and other individuals
3. name criteria to describe leadership and communication styles
4. understand psychodynamics of conflicts
5. understand group dynamics of conflicts

With respect to acquired skills, students shall be able to do the following:

1. reflect their individual human resources, assets and personal traits
2. discuss individual preferences in management and communication styles
3. act goal-oriented in communication and conflict situations
4. address conflicts and possible conflicts at an early stage
5. give and receive constructive feedback
6. be aware of, reflect and use their nonverbal communication

With respect to acquired competencies, students shall be able to do the following:

1. distinguish between unfiltered authentic behaviour, selective authenticity, and manipulation
2. make use of management and planning tools in managing their tasks
3. work towards sustainable conflict solutions
4. present creative ideas for leadership, development and conflict resolution

Wissen	Knowledge	Skills	Competencies
Fach	X	X	X
System	X	X	X
Selbst	X	X	X
Sozial	X	X	X

### Content

Management skills are to a great extent **personal social skills**.

If one's personal experience is **conceptualized** and compared with typical **patterns**, this experience becomes a rich source for one's managerial practice and conflict competence, because it is no longer perceived just as personal and situative, but one can generalize and draw conclusions for other situations to come. These patterns can be **cultural**, they can have to do with **gender** as well as with **group dynamics** or the typical **stages** in groups, or **social systems**. Again, the open and critical awareness towards one's own experience is a necessary foundation

for all theoretical knowledge which can only be applied sensibly if this awareness is developed in the person.

Special tools help to **recognize, analyze and shape one's communication** in a goal-oriented way, starting with personal feedback to an employee or colleague (or receiving such feedback) up to giving directions when assigning a task to a group member. Leadership behaviour mostly consists in verbal communication, such as managing tasks, giving praise or encouraging someone. A manager who senses the fine line between condescending to someone or being an inviting, open minded and encouraging counterpart, will more often pick the **appropriate** tone for a given **person** from a distinct **cultural background** in a certain **situation** with a relevant **context**. The same applies for facilitating and moderating discussions.

### Teaching Forms

Lectures and Practicals

### Teaching Methods

Introductions, discussions, exercises, learning team, case studies, role play, tests, group work, presentations. Students are encouraged to bring in their own opinions and arguments.

### Literature/Learning Materials

Christian Rainer Weisbach: Leadership in Professional Conversation. – Beck-Wirtschaftsberater im dtv, 2005.

David Allen: Getting things done. – Penguin Books 2001

Eric Berne: Games People Play: The Psychology of Human Relations. – Originally 1964, many later editions, e. g. Grove Press 1978

Henry Mintzberg: Developing Leaders? Developing Countries? – Oxford Leadership Journal Vol 1.1, March 2010, retrieved on Jan. 20, 2012 from the following source:[http://www.oxfordleadership.com/journal/vol1\\_issue2/mintzberg.pdf](http://www.oxfordleadership.com/journal/vol1_issue2/mintzberg.pdf)

Julia Middleton: Beyond Authority. Leadership in a changing world. – Palgrave Macmillan 2007

Jim Kouzes, Barry Posner: Leadership Practice Inventory:<http://www.leadershipchallenge.com/professionals-section-lpi.aspx>

Jim Kouzes, Barry Posner: Leadership Challenge. The leadership practices inventory. – San Francisco 2007

Reinhard Sprenger: Trust. The Best Way to Manage. – Campus, Frankfurt, New York 2007

Sheryl Sandberg: Lean in. Women, work, and the will to lead. – New York, 2013

Carl R. Rogers: On Becoming a Person. A Therapist's View of Psychotherapy. – Boston 1961 (p. 183-196)

Walter Isaacson: Steve Jobs. – New York, 2011

Pavan Sukhdev: Corporation 2020. Transforming business for tomorrow's world. – Washington, DC 2012. (p. 6-7: Corporation 1920, p. 62-63: Exclusions, p. 228-235: The world of Corporation 2020)

Viktor Mayer-Schönberger, Kenneth Cukier: Big Data. A revolution that will transform how we live, work and think. – London, 2013. (p. 64-65: Correlations do not prove causality)  
 Thomas Piketty: Capital in the 21st century. – Cambridge, Mass. and London, 2014  
 Paul Mason: Postcapitalism. A guide to our future. – St. Ives, UK 2015

**Specifics**

Flipchart, PowerPoint-presentations, photo protocols of all sessions, text excerpts, exercise sheets, PDF-files as text samples

**Organization of Course**

<b>Weekly Attendance</b> 4,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 45,0 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of Module

<b>Code</b> 103-007	<b>Title of Module</b> Portfolio Management & Risk Management
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <ul style="list-style-type: none"> <li>• Describe basic empirical methods to check the assumptions made in financial models.</li> <li>• Apply statistical tests in order to examine assumptions about risks and return series.</li> <li>• Analyze the risk structure and the management approach of real portfolios</li> </ul>
<p><b>Content</b></p> <p>Portfolio Management &amp; Risk Management</p> <ul style="list-style-type: none"> <li>• Portfolio Management</li> <li>• Quantitative Instruments of Modern Risk Management</li> </ul>
<p><b>Teaching Forms</b></p> <p>Lectures, Practicals</p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	<p>Knowledge, comprehension, skills and competences from following course units:</p> <ul style="list-style-type: none"> <li>• Financial Analysis</li> <li>• Quantitative Finance &amp; Econometrics</li> </ul>
<b>Preparation for the Module</b>	Pre-reading of the recommended literature.

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	<p>Students can apply acquired knowledge, skills and competencies in following other courses:</p> <ul style="list-style-type: none"> <li>• Financial Analysis</li> <li>• Quantitative Finance &amp; Econometrics</li> <li>• Applied International Corporate Finance</li> <li>• Applied Quantitative Corporate Finance</li> <li>• Portfolio Management &amp; Risk Management</li> </ul> <p>All other programs in Finance and Business Administration</p>
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

<p><b>Content</b></p> <p>In the module portfolio management and risk management students learn theories and models of managing assets consisting of different asset classes. After considering returns, risk is the second</p>
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key decision criteria in any investment process. Sustainable development requires the awareness of risks, techniques to measure risks and possible instruments to reduce risks.

### Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Klausur (120 Minuten)	100 %

### Organization of Course

<b>Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b>		
<b>Type of Module</b> Pflicht	<b>Recurrence</b> jedes Sommersemester	<b>Duration</b> 1 Semester
<b>Admission Criteria</b> none	<b>ECTS Points</b> 7,00	<b>Weekly Attendance</b> 6,00
<b>Workload</b> 7,00 x 25 Stunden = 175,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b> 67,5 Std. / 38,6 %	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

### Content Structure

Code	Title of the Module Element
103-007-01	Portfolio Management
103-007-03	Risk Management
103-007-02	Tutorial: Portfolio Management

## Description of the Module Element

<b>Code</b> 103-007-01	<b>Title of the Module Element</b> Portfolio Management
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## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. summarize fundamental assumptions made in financial economics
2. describe basic empirical methods to check the assumptions made in financial models
3. give an overview of methods used in applied modern portfolio management
4. explain portfolio risk measurement approaches

With respect to acquired skills, students shall be able to do the following:

5. check the properties of return series of financial assets
6. apply statistical tests in order to examine assumptions about return series
7. construct even large covariance or correlation matrices of financial assets
8. solve portfolio optimization problems
9. calculate risk measures for a given portfolio like the value at risk

With respect to acquired competencies, students shall be able to do the following:

10. interpret practical portfolio management cases and derive conclusions
11. analyze the risk structure and the management approach of real portfolios
12. implement various methods in order to tackle portfolio management tasks in the analysis of speculative assets, portfolio construction and risk management in today's asset management environment
13. combine interdisciplinary knowledge of statistics, econometrics and quantitative finance in order to solve specific portfolio management tasks

Wissen	Knowledge	Skills	Competencies
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### Content

Basic Elements and Assumptions of Financial Economics

1. Distributional Properties of Financial Time Series
  - a. Return and Uncertainty
  - b. Normal and Log- Normal Distribution
  - c. Random Walk and Stationarity
2. Dispersion of Financial Time Series
  - a. Higher Central Moments of a Distribution
  - b. Statistical Test Procedures
  - c. Conditional Variances and Heteroscedasticity
3. Covariance Estimation
  - a. Parametric Approach
  - b. Factor Approach

## Portfolio Management

### 4. Active Portfolio Management

- a. Portfolio Management Approaches
- b. The Efficient Market Hypothesis

### 5. Passive Portfolio Management

### 6. Portfolio Theory and Optimization

- a. Mean-Variance-Optimization and the Efficient Frontier
- b. Alternative Optimization Techniques

### 7. (Benchmark-) Relative Optimization and Active Management

## Portfolio Risk Management

### 8. Portfolio Risk and the Capital Asset Pricing Model

- a. Systematic Risk
- b. Residual Risk
- c. Active Risk

### 9. Risk measurement

- a. Shortfall Risk
- b. Value at Risk

### 10. Portfolio Risk Controlling and Risk Management

## Teaching Forms

Lectures, Practicals, Lectures and Practicals

## Teaching Methods

Lectures, Discussions, Exercises

## Literature/Learning Materials

- Lecturers own script
- John Y. Campbell, Andrew W. Lo, A. Craig MacKinlay: The Econometrics of Financial Markets, 1997, Princeton Univ. Press
- Thomas S. Y. Ho, Sang Bin Lee: The Oxford Guide to Financial Modeling: Applications for Capital Markets, Corporate Finance, Risk Management, and Financial Institutions, 2004, Oxford Univ. Press
- Alexander, Carol: Market Risk Analysis, Vol. 1-4, 2008, Wiley
- Paul Wilmott: Frequently asked Questions in Quantitative Finance, 2. ed, 2009, Wiley
- Fabozzi, Frank J.: Quantitative Equity Investing: Techniques and Strategies, 2010, Wiley

## Specifics

Flipchart, Metaplan board, PowerPoint-presentations, Excel sheets for downloading, Internet resources

## Organization of Course



<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch oder Deutsch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b> 103-007-03	<b>Title of the Module Element</b> Risk Management
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## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>1. describe the importance of quantitative methods of risk management</li> <li>2. explain the reason for economic decisions and to optimize risk-return profile of the company</li> <li>3. Summarize the main methods for quantitative description of risks (probability distribution, stochastic processes), risk measures and simulation methods explained, which are essential for risk aggregation and determination of the overall risk position.</li> </ol> <p>With respect to acquired skills, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>4. apply quantitative methods of decision support under uncertainty</li> <li>5. Recognize how frequency or probability distributions of the company's results derived from risk analysis and risk aggregation can be evaluated with regard to the consequences for (a) the lender (rating) and (b) the owner / investor (fundamentally calculated value).</li> </ol> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>6. interpret the restrictive assumptions and limitations of traditional methods that have been developed on the hypothesis of perfect capital markets (such as the CAPM)</li> <li>7. analyze the theory of traditional and advanced (simulation based) rating and valuation procedures presented</li> <li>8. Evaluate how risk-assessment is possible based on the results of risk analysis and risk aggregation and how the required evaluation equations (e.g. replication approaches) can be derived.</li> </ol>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <p>Introduction (Risk Quantification &amp; Types)</p> <p>Risk Measures</p> <p>Copulas &amp; Risk Aggregation</p>			
<p><b>Teaching Forms</b></p> <p>Lectures, Practicals, Lectures and Practicals</p>			
<p><b>Teaching Methods</b></p> <p>Lectures and Tutorials</p>			
<p><b>Literature/Learning Materials</b></p> <ul style="list-style-type: none"> <li>• Benninga, S.: Financial Modeling, MIT Press, 2008</li> <li>• Chiang, A.C.: Fundamental Methods of mathematical Economics, McGraw-Hill, 1984</li> <li>• Cvitanic, J., Zapatero, F.: Introduction to the Economics and Mathematics of Financial Markets, MIT Press, 2004</li> </ul>			

- Hull, J.: Options, Futures and Other Derivatives, Prentice Hall, 2008
- Jorion, P.: Financial Risk Manager Handbook, Wiley Finance, 2007
- Keller, G., Warrack, B.: Statistics for Management and Economics, Brooks/Cole, 1997
- McGlave, J.T., Benson, P.G.: Statistics for Business and Economics, Prentice Hall, 1994
- Steiner, R.: Mastering Financial Calculations. A Stepp-by-step guide to the mathematics of financial market instruments- Financial Times Management, 1998
- Sydsaeter, K., Hammond, P.: Essential Mathematics for Economic Analysis, Pearson, 2002.
- Wilmott, P.: Paul Wilmott on Quantitative Finance, John Wiley & Sons, 2006

**Specifics**

PowerPoint-presentations, Excel sheets for downloading

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-007-02	Tutorial: Portfolio Management

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. summarize fundamental assumptions made in financial economics
2. describe basic empirical methods to check the assumptions made in financial models
3. give an overview of methods used in applied modern portfolio management
4. explain portfolio risk measurement approaches

With respect to acquired skills, students shall be able to do the following:

5. check the properties of return series of financial assets
6. apply statistical tests in order to examine assumptions about return series
7. construct even large covariance or correlation matrices of financial assets
8. solve portfolio optimization problems
9. calculate risk measures for a given portfolio like the value at risk

With respect to acquired competencies, students shall be able to do the following:

10. interpret practical portfolio management cases and derive conclusions
11. analyze the risk structure and the management approach of real portfolios
12. implement various methods in order to tackle portfolio management tasks in the analysis of speculative assets, portfolio construction and risk management in today's asset management environment
13. combine interdisciplinary knowledge of statistics, econometrics and quantitative finance in order to solve specific portfolio management tasks

Wissen	Knowledge	Skills	Competencies
Fach			
System			
Selbst			
Sozial			

### Content

Basic Elements and Assumptions of Financial Economics

1. Distributional Properties of Financial Time Series
  - a. Return and Uncertainty
  - b. Normal and Log- Normal Distribution
  - c. Random Walk and Stationarity
2. Dispersion of Financial Time Series
  - a. Higher Central Moments of a Distribution
  - b. Statistical Test Procedures
  - c. Conditional Variances and Heteroscedasticity

3. Covariance Estimation
  - a. Parametric Approach
  - b. Factor Approach
- Portfolio Management
4. Active Portfolio Management
  - a. Portfolio Management Approaches
  - b. The Efficient Market Hypothesis
5. Passive Portfolio Management
6. Portfolio Theory and Optimization
  - a. Mean-Variance-Optimization and the Efficient Frontier
  - b. Alternative Optimization Techniques
7. (Benchmark-) Relative Optimization and Active Management
- Portfolio Risk Management
8. Portfolio Risk and the Capital Asset Pricing Model
  - a. Systematic Risk
  - b. Residual Risk
  - c. Active Risk
9. Risk measurement
  - a. Shortfall Risk
  - b. Value at Risk
10. Portfolio Risk Controlling and Risk Management

#### **Teaching Forms**

#### **Teaching Methods**

Discussions, Exercises

#### **Literature/Learning Materials**

- Lecturers own script
- John Y. Campbell, Andrew W. Lo, A. Craig MacKinlay: The Econometrics of Financial Markets, 1997, Princeton Univ. Press
- Thomas S. Y. Ho, Sang Bin Lee: The Oxford Guide to Financial Modeling: Applications for Capital Markets, Corporate Finance, Risk Management, and Financial Institutions, 2004, Oxford Univ. Press
- Alexander, Carol: Market Risk Analysis, Vol. 1-4, 2008, Wiley
- Paul Wilmott: Frequently asked Questions in Quantitative Finance, 2. ed, 2009, Wiley
- Fabozzi, Frank J.: Quantitative Equity Investing: Techniques and Strategies, 2010, Wiley

#### **Specifics**

Flipchart, Metaplan board, PowerPoint-presentations, Excel sheets for downloading, Internet resources

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## Organization of Course

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of Module

<b>Code</b> 103-004	<b>Title of Module</b> Quantitative Finance & Econometrics
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <p>Students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• Explain the statistical and mathematical concepts underlying financial theory and econometric modelling</li> <li>• Solve quantitative problems in finance using modern IT-tools and econometric analysis.</li> <li>• Evaluate the results, estimation and hypothesis testing of quantitative models and econometric models.</li> </ul>
<p><b>Content</b></p> <p>Quantitative Finance &amp; Econometrics</p> <ul style="list-style-type: none"> <li>• Quantitative Finance</li> <li>• Tutorial: Quantitative Finance</li> <li>• Econometrics</li> </ul>
<p><b>Teaching Forms</b></p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	Basics in mathematics and statistics
<b>Preparation for the Module</b>	Online course "Quantitative Methods" of Harvard Business School recommended.  Pre-reading of the recommended literature.

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	<p>Students can apply acquired knowledge, skills and competencies in following other courses:</p> <ul style="list-style-type: none"> <li>• Financial Analysis</li> <li>• Applied International Corporate Finance</li> <li>• Applied Quantitative Corporate Finance</li> <li>• Portfolio Management &amp; Risk Management</li> <li>• Derivatives &amp; Financial Engineering</li> </ul> <p>All other programs in Finance and Business Administration</p>
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

### Content

Quantitative Finance and econometrics provide the more technical skills for sustainable management decisions. Without the necessary quantitative background managers are unable to make profound und responsible decisions. Sustainable development requires quantitative skills to reproduce the complex reality in a simplified way. They provide feasibility and decision support, reduced risk, additional insights and knowledge gain.

## Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Klausur (120 Minuten)	100 %

## Organization of Course

<b>Responsible for Module</b> Prof. Dr. Holger Fink		
<b>Further Persons Responsible for Module</b> Prof. Dr. Max C. Wewel		
<b>Type of Module</b> Pflicht	<b>Recurrence</b> jedes Wintersemester	<b>Duration</b> 1 Semester
<b>Admission Criteria</b> none	<b>ECTS Points</b> 8,00	<b>Weekly Attendance</b> 6,00
<b>Workload</b> 8,00 x 25 Stunden = 200,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b> 67,5 Std. / 33,8 %	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

## Content Structure

Code	Title of the Module Element
103-004-01	Quantitative Finance
103-004-02	Tutorial: Quantitative Finance
103-004-03	Econometrics



## Description of the Module Element

<b>Code</b> 103-004-01	<b>Title of the Module Element</b> Quantitative Finance
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## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• have the necessary knowledge in order to recognize and formulate specific (financial &amp; statistical) problems</li> <li>• derive main ideas of market and time series model</li> </ul> <p>With respect to acquired skills, students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• solve problems in theory and practice by using specific mathematical methods</li> <li>• apply basic mathematical methods</li> <li>• apply mathematical tools to deal with pricing &amp; risk problems</li> </ul> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• understand and apply the fundamental concepts of quantitative methods and of quantitative analysis in finance</li> <li>• apply and modify their knowledge to solve complex and unforeseeable problems</li> <li>• recognize new problems, compare various methods and to implement various methods in a suitable and effective way</li> <li>• combine interdisciplinary knowledge (economical and mathematical) in order to solve (new) problems</li> </ul> <p>compare various methods of valuation and to implement various methods in a suitable and effective way</p>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <ul style="list-style-type: none"> <li>• Introduction to Financial Data, Bloomberg &amp; MATLAB (Financial Returns &amp; Stylized Facts)</li> <li>• Mathematical Finance (Binomial &amp; Black-Scholes Model: Setup, Estimation &amp; Simulation)</li> <li>• Financial Econometrics (ARMA-GARCH-Models: Setup, Estimation, Goodness-of-Fit &amp; Simulation)</li> </ul>			
<p><b>Teaching Forms</b></p> <p>Lectures and Practicals</p>			
<p><b>Teaching Methods</b></p> <p>Lectures, discussions, exercises, case studies.</p>			

**Literature/Learning Materials**

- Benninga, S.: Financial Modeling, MIT Press, 2008
- Chiang, A.C.: Fundamental Methods of mathematical Economics, McGraw-Hill, 1984
- Cvitanic, J., Zapatero, F.: Introduction to the Economics and Mathematics of Financial Markets, MIT Press, 2004
- Hull, J.: Options, Futures and Other Derivatives, Prentice Hall, 2008
- Jorion, P.: Financial Risk Manager Handbook, Wiley Finance, 2007
- Keller, G., Warrack, B.: Statistics for Management and Economics, Brooks/Cole, 1997
- McGlave, J.T., Benson, P.G.: Statistics for Business and Economics, Prentice Hall, 1994
- Steiner, R.: Mastering Financial Calculations. A Stepp-by-step guide to the mathematics of financial market instruments- Financial Times Management, 1998
- Sydsaeter, K., Hammond, P.: Essential Mathematics for Economic Analysis, Pearson, 2002
- Wilmott, P.: Paul Wilmott on Quantitative Finance, John Wiley & Sons, 2006

**Specifics**

board, PowerPoint presentations, Excel Sheets

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> ja	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b> 103-004-02	<b>Title of the Module Element</b> Tutorial: Quantitative Finance
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## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• have the necessary knowledge in order to recognize and formulate specific (financial &amp; statistical) problems</li> <li>• derive main ideas of market and time series model</li> </ul> <p>With respect to acquired skills, students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• solve problems in theory and practice by using specific mathematical methods</li> <li>• apply basic mathematical methods</li> <li>• apply mathematical tools to deal with pricing &amp; risk problems</li> </ul> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• understand and apply the fundamental concepts of quantitative methods and of quantitative analysis in finance</li> <li>• apply and modify their knowledge to solve complex and unforeseeable problems</li> <li>• recognize new problems, compare various methods and to implement various methods in a suitable and effective way</li> <li>• combine interdisciplinary knowledge (economical and mathematical) in order to solve (new) problems</li> <li>• compare various methods of valuation and to implement various methods in a suitable and effective way</li> </ul>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <ul style="list-style-type: none"> <li>• Introduction to Financial Data, Bloomberg &amp; MATLAB (Financial Returns &amp; Stylized Facts)</li> <li>• Mathematical Finance (Binomial &amp; Black-Scholes Model: Setup, Estimation &amp; Simulation)</li> <li>• Financial Econometrics (ARMA-GARCH-Models: Setup, Estimation, Goodness-of-Fit &amp; Simulation)</li> </ul>			
<p><b>Teaching Forms</b></p> <p>Lectures and Practicals</p>			
<p><b>Teaching Methods</b></p> <p>Lectures, discussions, exercises, case studies.</p>			

**Literature/Learning Materials**

- Benninga, S.: Financial Modeling, MIT Press, 2008
- Chiang, A.C.: Fundamental Methods of mathematical Economics, McGraw-Hill, 1984
- Cvitanic, J., Zapatero, F.: Introduction to the Economics and Mathematics of Financial Markets, MIT Press, 2004
- Hull, J.: Options, Futures and Other Derivatives, Prentice Hall, 2008
- Jorion, P.: Financial Risk Manager Handbook, Wiley Finance, 2007
- Keller, G., Warrack, B.: Statistics for Management and Economics, Brooks/Cole, 1997
- McGlave, J.T., Benson, P.G.: Statistics for Business and Economics, Prentice Hall, 1994
- Steiner, R.: Mastering Financial Calculations. A Stepp-by-step guide to the mathematics of financial market instruments- Financial Times Management, 1998
- Sydsaeter, K., Hammond, P.: Essential Mathematics for Economic Analysis, Pearson, 2002
- Wilmott, P.: Paul Wilmott on Quantitative Finance, John Wiley & Sons, 2006

**Specifics**

board, PowerPoint presentations, Excel Sheets

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> ja	<b>Recommended Semester</b> 1 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b>	<b>Title of the Module Element</b>
103-004-03	Econometrics

## Content Structure

### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

1. Explain the statistical concepts underlying econometric modelling;
2. Describe the basic ideas of regression analysis;
3. Formulate the classical assumptions in econometrics and explain their implications on estimation and hypothesis testing;
4. Discuss specification problems in applied econometric models and their remedies.

With respect to acquired skills, students shall be able to do the following:

5. Calculate by hand some important statistics used in econometric analysis;
6. Perform estimation and hypothesis testing with EViews software;
7. Interpret the results of econometric analyses as presented in EViews output tables.

With respect to acquired competencies, students shall be able to do the following:

8. Reflect and assess the specification quality of an applied econometric model;
9. Evaluate the results of estimation and hypothesis testing of an econometric model,
10. Apply econometric methodology in researching new real world problems.

Wissen	Knowledge	Skills	Competencies
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### Content

1. Introduction
2. Statistical Foundations
  - 2.1 Basic Concepts of Probability Theory
  - 2.2 The Normal Distribution
  - 2.3 Introduction to Sampling Theory
  - 2.4 Estimation of Parameters
  - 2.5 Hypothesis Testing
3. Introduction to Regression Analysis
  - 3.1 The Basic Linear Regression Model
  - 3.2 Ordinary Least Squares
  - 3.3 Applying Regression Analysis
  - 3.4 Introduction to EViews
4. The Classical Model of Econometrics
  - 4.1 The Classical Assumptions

<p>4.2 Implications for OLS Coefficient Estimation</p> <p>4.3 The t-Test</p> <p>4.4 The F-Test</p> <p>5. Problems in Applied Econometrics</p> <p>5.1 Violations of the Classical Assumptions</p> <p>5.2 Incorrect Regression Function</p> <p>5.3 Multicollinearity</p> <p>5.4 Serial Correlation</p> <p>5.5 Heteroskedasticity</p> <p>5.6 Some General Recommendations</p>
<p><b>Teaching Forms</b></p> <p>Lectures and Practicals</p>
<p><b>Teaching Methods</b></p> <p>Lectures, discussions, exercises, case studies, simulation, group work, presentations.</p>
<p><b>Literature/Learning Materials</b></p> <ul style="list-style-type: none"> <li>· Studenmund, A.H.: Using Econometrics – A Practical Guide, 6th Edition, Pearson Education: Boston 2011</li> <li>· Stock, J.H. / Watson, M.W.: Introduction to Econometrics, 3rd Edition, Pearson Education: Boston 2012</li> <li>· EViews software</li> </ul>
<p><b>Specifics</b></p> <p>Overhead projector, computer, EViews software</p>

### Organization of Course

<p><b>Weekly Attendance</b></p> <p>2,00</p>	<p><b>Division into Groups</b></p> <p>ja</p>	<p><b>Recommended Semester</b></p> <p>1 Semester</p>	<p><b>Language</b></p> <p>Englisch</p>
<p><b>Attendance / Contact Hours</b></p> <p>22,5 Std.</p>	<p><b>Preparation/Homework/Self-Study</b></p>		<p><b>Time for Exercises/ Group Work</b></p>

## Description of Module

<b>Code</b> 103-008	<b>Title of Module</b> Derivatives & Financial Engineering
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## Significance of Module for the Goals of the Study Course

<p><b>Qualification Goals</b></p> <p>Students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• State the key principles of financial theory, essential mathematical methods, and the concept of risk-neutral pricing.</li> <li>• Analyze and structure derivatives</li> <li>• Implement advanced mathematical methods and computer technology to create innovative solutions for pricing, hedging and trading of financial derivatives</li> </ul>
<p><b>Content</b></p> <p>Derivatives &amp; Financial Engineering.</p> <ul style="list-style-type: none"> <li>• Derivatives</li> <li>• Financial Engineering</li> </ul>
<p><b>Teaching Forms</b></p>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	Knowledge, comprehension, skills and competences from following course units: Quantitative Finance & Econometrics
<b>Preparation for the Module</b>	Pre-reading of the recommended literature.

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	Students can apply acquired knowledge, skills and competencies in following other courses: <ul style="list-style-type: none"> <li>• Financial Analysis</li> <li>• Quantitative Finance &amp; Econometrics</li> <li>• Applied International Corporate Finance</li> <li>• Applied Quantitative Corporate Finance</li> <li>• Portfolio Management &amp; Risk Management</li> </ul> All other programs in Finance and Business Administration
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

<b>Content</b>
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Derivatives are instruments used to hedge risks of volatile currencies, interest rates or commodities. Financial engineering is the technique used to create custom-made financial solutions. Hedging instruments always need a counterpart, and this comes in the form of a speculator. This means that hedging has two sides of a coin, which are risk reduction and speculation. Sustainable development in financial industries requires in-depth knowledge about how derivatives are engineered and how they can be used for companies' purposes. The module contains a critical review of derivatives in the context of an abusive use of speculation.

### Exam Requirements (necessary for the awarding of points)

Type and Duration (min.)	Weighting %
Klausur (120 Minuten)	100 %

### Organization of Course

<b>Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b> Dr. Sörensen, Mr. Bloss		
<b>Type of Module</b> Pflicht	<b>Recurrence</b> jedes Sommersemester	<b>Duration</b> 1 Semester
<b>Admission Criteria</b> none	<b>ECTS Points</b> 8,00	<b>Weekly Attendance</b> 6,00
<b>Workload</b> 8,00 x 25 Stunden = 200,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b> 67,5 Std. / 33,8 %	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

### Content Structure

Code	Title of the Module Element
103-008-01	Financial Engineering
103-008-02	Derivatives in Financial Engineering
103-008-03	Tutorial: Derivatives in Financial Engineering



## Description of the Module Element

<b>Code</b> 103-008-01	<b>Title of the Module Element</b> Financial Engineering
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## Content Structure

<p><b>Qualification Goals</b></p> <p>With respect to acquired knowledge, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>1. State the key principles in financial theory, essential mathematical methods, and the concept of risk-neutral pricing</li> <li>2. Frame and describe in detail the valuations for forwards, swaps and options</li> <li>3. Explain the theoretical basis for the risk-neutral pricing approach including the underlying assumptions</li> </ol> <p>With respect to acquired skills, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>4. Analyze and structure derivatives</li> <li>5. Identify and set up various trading and hedging strategies depending on given underlying risks and/or market expectations</li> </ol> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ol style="list-style-type: none"> <li>7. Understand the proper utilization of derivatives in practice</li> <li>8. Implement advanced mathematical methods and computer technology to create innovative solutions for pricing, hedging and trading of financial derivatives</li> <li>9. Apply both discrete and continuous time models in order to provide insights into the concept of risk-neutral pricing, which has significant ramifications both in theory and practice</li> </ol>			
Wissen	Knowledge	Skills	Competencies
<p><b>Content</b></p> <ol style="list-style-type: none"> <li>1. Valuation and analysis of forwards and futures</li> <li>2. Valuation and analysis of swaps</li> <li>3. Stochastic processes in discrete and continuous time</li> <li>4. Determination of option prices in discrete time</li> <li>5. Determination of option prices in continuous time</li> <li>6. Greeks</li> <li>7. Hedging Strategies</li> </ol>			
<p><b>Teaching Forms</b></p> <p>Lectures, Practicals, Lectures and Practicals</p>			
<p><b>Teaching Methods</b></p> <p>Lectures, Discussions, Exercises</p>			
<p><b>Literature/Learning Materials</b></p> <ul style="list-style-type: none"> <li>• Hull, J. (2008) Options, Futures, and Other Derivatives</li> </ul>			

- Watsham, T. & Parramore, K. (1996) Quantitative Methods for Finance, optional
- Tuckman, B. (2002) Fixed Income Securities, optional
- Brealey, R., Myers, S. & Allen, F. (2010) Principles of Corporate Finance, optional

**Specifics**

Flipchart, Metaplan board, PowerPoint-presentations, Excel sheets for downloading

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> nein	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b> 103-008-02	<b>Title of the Module Element</b> Derivatives in Financial Engineering
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## Content Structure

### Qualification Goals

#### Qualification Goals

With respect to acquired knowledge, students shall be able to do the following:

- Summarize the theoretical toolbox of derivatives and a multitude of smaller exercises/case studies.
- Understand the derivative instruments in interest rates, credit and equities
- Explain the risk/return profile of structured products
- Describe in their own words the most important financial instruments in Financial Engineering.
- Derive main ideas of derivative transactions.

With respect to acquired skills, students shall be able to do the following:

- apply this theoretical framework in business practice
- apply knowledge in the structuring process of tailor made financial solutions
- Have the ability to plan and carry out suitable experiments and to evaluate and interpret the resulting data to arrive at conclusions

With respect to acquired competencies, students shall be able to do the following:

- fill a position in a trading and sales unit of an international bank
- design simple financial engineering solutions independently
- combine interdisciplinary knowledge in order to solve (new) problems

Wissen	Knowledge	Skills	Competencies
Fach	X	X	X
System	X	X	X
Selbst		X	X
Sozial		X	X

### Content

1. Derivatives Exchanges
  - 1.1 Electronic trading vs. open outcry
  - 1.2 Eurex, CBOE, CME, LIFFE
    1. Clearing and Margining
  - 2.1 RBM (Risk based margining) vs. SPAN (Standard Portfolio Analysis of Risk) and TIMS (Theoretical Intermarket Margin System); Eurex Clearing Prisma
    - 2.1.1 Margining of Options

- 2.1.2 Margining of Futures
- 2.2 The Margincall
  - 1. Risk Controlling
- 3.1 Risk Controlling Options and Futures Acc. and Traders
- 3.2 Risk Controlling of A1
- 3.3 Risk Controlling of M1
  - 1. Derivatives Instruments and valuation
- 4.1 Options
- 4.2 Futures
- 4.3 Options on Futures
- 4.4 Combinations
- 4.5 Exotic Options
  - 1. Interest Rate Derivatives of Fixed Income Solutions
- 5.1 Definition
- 5.2 OTC derivatives
- 5.3 Listed options and futures
  - 1. Equity Derivatives and Structuring Techniques
- 6.1 Definition
- 6.2 Instruments used in portfolio management
- 6.3 Instruments used in fond management
- 6.4 Financial Engineering with derivatives
- 6.5 Motives for equity derivatives and financial engineering
  - 1. Credit Derivatives and Related Instruments
- 7.1 Definition
- 7.2 Instruments
- 7.3 Valuing of credit derivatives
  - 1. Pricing of Derivatives
- 8.1 Black Scholes Model
- 8.2 Binomial Methods (Cox, Ross, Rubinstein)
- 8.3 Garman-Kohlhagen
- 8.4 Monte Carlo Methods
- 8.5 Sparse Grid Method

1. Forecast models; GARCH, ARCH, Short rate models; Geometrical Brownian Motion and Ornstein Uhlenbeck process
2. Greeks
  - 10.1 Delta
  - 10.2 Gamma
  - 10.3 Theta
  - 10.4 Rho
  - 10.5 Vega
  - 10.6 Greeks used in hedging transactions
  - 10.7 Greeks used in special market situations
1. Strategies with Options and Futures
  - 11.1 Speculation
  - 11.2 Hedging
  - 11.3 Spread trading
  - 11.4 Combinations
1. FX Derivatives
  - 12.1 Pricing of FX derivatives
  - 12.2 Strategies
1. Commodity Derivatives
  - 13.1 Pricing of commodity derivatives
  - 13.2 Strategies for hedging, speculation and spread trading
1. SWAP and Swaptions
  - 14.1 Instruments
  - 14.2 Valuing
  - 14.3 Strategies
1. IRG and FRA
2. Cap, Floors and Collars
  - 16.1 Instruments
  - 16.2 Valuing
  - 16.3 Strategies
1. Exotic Options
  - 17.1 Instruments
  - 17.2 Pricing and valuing of exotic options

17.3	Strategies with exotic options
17.4	Exotic options in financial engineering products
1.	Derivatives Used in Financial Engineering
18.1	Financial engineering process
18.2	Instruments and strategies used in the financial engineering process
18.3	Valuing of a financial engineering product
18.4	Desks of a financial engineering department
18.5	Issuers and products
18.6	Offering
18.6.1	Public offering
18.6.2	Private placement
1.	Case studies for strategic applications of tailor made financial solutions in asset and liability problems
<b>Teaching Forms</b>	
<b>Teaching Methods</b>	
Lectures, Discussions, Exercises, Group work, presentation.	
<b>Literature/Learning Materials</b>	
<ul style="list-style-type: none"> <li>· Lecturers own script</li> <li>· Michael Bloss, Dietmar Ernst, Joachim Häcker, Daniel Sörensen: Financial Engineering</li> </ul>	
Optional:	
<ul style="list-style-type: none"> <li>· Antulio N. Bonfim, (December 2004) Understanding Credit Derivatives and Related Instruments</li> <li>· John Hull, Options, Futures and other Derivatives</li> <li>· Paul Glassermann: Monte Carlo Methods in Financial Engineering</li> </ul>	
Domingo Tavella, Curt Randall: Pricing Financial Instruments: The Finite Difference Method	
<b>Specifics</b>	
Flipchart, Metaplan board, PowerPoint-presentations, Excel sheets for downloading, Live-simulations, Bloomberg, Matlab®, etc.	

### Organization of Course

<b>Weekly Attendance</b>	<b>Division into Groups</b>	<b>Recommended Semester</b>	<b>Language</b>
2,00	nein		Englisch oder Deutsch

		2 Semester	
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of the Module Element

<b>Code</b> 103-008-03	<b>Title of the Module Element</b> Tutorial: Derivatives in Financial Engineering
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## Content Structure

<p><b>Qualification Goals</b></p> <p>Active and independent insertion of derivatives and trading solutions</p> <ul style="list-style-type: none"> <li>• Constructing financial engineering products</li> <li>• Review and explanation of existing product</li> <li>• Analyse and structure derivatives</li> <li>• Valuation and modelling</li> </ul> <p>With respect to acquired competencies, students shall be able to do the following:</p> <ul style="list-style-type: none"> <li>• Understand the proper utilization of derivatives in practice</li> <li>• Implement trading strategies in terms of exchange-traded derivatives.</li> <li>• Inserting and evaluating OTC derivatives</li> <li>• Use of financial engineering products</li> </ul>			
Wissen	Knowledge	Skills	Competencies
Fach	X	X	X
System	X	X	X
Selbst			
Sozial			
<p><b>Content</b></p> <ul style="list-style-type: none"> <li>• Derivatives Trading Strategies</li> <li>• Eurex Trading</li> <li>• Applied Trading</li> <li>• Create Financial Engineering Products</li> <li>• Financial Engineering Process</li> <li>• Construct and evaluation of Financial Engineering Products</li> <li>• Physics in Finance; Econophysics and Models</li> <li>• Practical use of Derivatives in Financial Engineering</li> </ul>			
<p><b>Teaching Forms</b></p> <p>Lectures, Practicals, Lectures and Practicals</p>			
<p><b>Teaching Methods</b></p> <p><b>Lectures, Discussions, Exercises</b></p>			
<p><b>Literature/Learning Materials</b></p>			



Bloss, Ernst, Häcker, Sörensen (2012) Options, Futures, and Other Derivatives

Financial Engineering Hull, J. (2008)

*optional* **Lecturers own script**

**Specifics**

Flipchart, Metaplan board, PowerPoint-presentations, Excel sheets for downloading; Bloomberg, Matlab®

**Organization of Course**

<b>Weekly Attendance</b> 2,00	<b>Division into Groups</b> ja	<b>Recommended Semester</b> 2 Semester	<b>Language</b> Englisch oder Deutsch
<b>Attendance / Contact Hours</b> 22,5 Std.	<b>Preparation/Homework/Self-Study</b>		<b>Time for Exercises/ Group Work</b>

## Description of Module

<b>Code</b> 103-009	<b>Title of Module</b> Elective 1: Accounting
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## Significance of Module for the Goals of the Study Course

<b>Qualification Goals</b>
<b>Content</b> Please refer to the module descriptions of the respective university abroad.
<b>Teaching Forms</b>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	
<b>Preparation for the Module</b>	

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

<b>Content</b>
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## Exam Requirements (necessary for the awarding of points)

<b>Type and Duration (min.)</b>	<b>Weighting %</b>

## Organization of Course

<b>Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b>		
<b>Type of Module</b> Wahlpflicht	<b>Recurrence</b> keine Angabe	<b>Duration</b> 1 Semester
<b>Admission Criteria</b>	<b>ECTS Points</b> 15,00	<b>Weekly Attendance</b>

<b>Workload</b> 15,00 x 25 Stunden = 375,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b>	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

### Content Structure

Code	Title of the Module Element
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## Description of Module

<b>Code</b> 103-010	<b>Title of Module</b> Elective 2: Banking
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## Significance of Module for the Goals of the Study Course

<b>Qualification Goals</b>
<b>Content</b> Please refer to the module descriptions of the respective university abroad.
<b>Teaching Forms</b>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	
<b>Preparation for the Module</b>	

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

<b>Content</b>
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## Exam Requirements (necessary for the awarding of points)

<b>Type and Duration (min.)</b>	<b>Weighting %</b>

## Organization of Course

<b>Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b>		
<b>Type of Module</b> Wahlpflicht	<b>Recurrence</b> keine Angabe	<b>Duration</b> 1 Semester
<b>Admission Criteria</b>	<b>ECTS Points</b> 15,00	<b>Weekly Attendance</b>

<b>Workload</b> 15,00 x 25 Stunden = 375,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b>	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

### Content Structure

Code	Title of the Module Element
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## Description of Module

<b>Code</b> 103-011	<b>Title of Module</b> Elective 3: Business Administration
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## Significance of Module for the Goals of the Study Course

<b>Qualification Goals</b>
<b>Content</b> Please refer to the module descriptions of the respective university abroad.
<b>Teaching Forms</b>

## Requirements for Participation

<b>Knowledge, Skills, Competencies</b>	
<b>Preparation for the Module</b>	

## Practicability of Module

<b>Relationship to other Modules within this Study Course</b>	
<b>Relevance to other Study Courses</b>	

## Contribution of the Module to Sustainable Development

<b>Content</b>
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## Exam Requirements (necessary for the awarding of points)

<b>Type and Duration (min.)</b>	<b>Weighting %</b>

## Organization of Course

<b>Responsible for Module</b> Prof. Dr. Dr. Dietmar Ernst		
<b>Further Persons Responsible for Module</b>		
<b>Type of Module</b> Wahlpflicht	<b>Recurrence</b> keine Angabe	<b>Duration</b> 1 Semester
<b>Admission Criteria</b>	<b>ECTS Points</b> 15,00	<b>Weekly Attendance</b>

<b>Workload</b> 15,00 x 25 Stunden = 375,0 Stunden, mit der folgenden Aufteilung		
<b>Attendance / Contact Hours</b>	<b>Preparation/Homework/Self-Study</b>	<b>Time for Exercises/Group Work</b>

### Content Structure

Code	Title of the Module Element
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