**Module Description**

### General Information:
- **Module number:**
- **Title (dt.):** Financial Engineering und Structured Finance (FIM)
- **Title (en.):** Financial Engineering und Structured Finance (FIM)
- **Module level:** MSc
- **Abbreviation:** FESt
- **Subtitle:**
- **Duration:** One semester
- **Occurrence - summer/winter:** Winter
- **Occurrence - regular/irregular:** Regular
- **Language:** German
- **Credits:** 4
- **Specialization:**
- **Date:**
- **Location:** Augsburg (University)
- **FIM-exclusivity:** Yes

### Workload:
- **Contact hours:** 45
- **Self-study hours:** 75
- **Total hours:** 120

### Achievement and assessment methods:
- **Description of achievement and assessment methods:**
  The module examination is based on a written exam. By answering questions in text form, students have to show their understanding of the concepts of the duplication of derivative securities and structured products. Moreover, knowledge about using these products for hedging or speculative purposes is required. By doing calculations, students have to demonstrate their ability to practically work with the mathematical methods presented in the course and apply these methods to solve financial problems like pricing of derivative securities and structured solutions. Students also have to develop and replicate innovative and new financial solutions. Students are allowed to use a non-programmable calculator.

- **Type of assessment:** Written
- **Duration of assessment (min):** 90 min
- **Assessment retake:** End of semester

### Description:
- **(Recommended) prerequisites**
  - Precourse "Investment and Finance"
  - MA9972 - Discrete Time Finance
  - MA4405 - Stochastic Analysis/Quantitative Methods in Finance
  (recommended)

- **Content:**
  Advanced valuation of fixed income products, spot market products, symmetrical derivatives, valuation of equity and interest options, valuation models for corporate bonds, credit derivatives, structured products, asset backed securities
### Intended learning outcomes:

After successful completion of the module, students are able to apply duplication and pricing methods to evaluate structured financial solutions, such as certificates and structured bonds. Moreover, students are able to price spot market products and symmetrical derivatives (interest rate forwards and swaps). They are able to understand different hedging and speculation techniques that are essential on capital markets. Furthermore, students understand the properties of credit derivatives and asset backed securities and can analyse the functionality of credit risk transfers.

### Teaching and learning methods:

Lectures with projector presentation and calculations on the tablet pc, excel-sheet with implemented excercises and examples to better understand calculations and functionalities of structured products and derivative securities. Excercises are held during the lecture time. Problems and excercises are solved interactively together with the lecturer.

### Media:

Course reserve collection, presentation slides, Excel-Sheets with programmed excercises and examples

### Reading list:

- Wilkens, Marco; Baule, Rainer; Entrop, Oliver (2004): Bundesschatzbriefe - Bewertung und empirische Analyse der Attraktivität für Anleger und Bund. Zeitschrift für Betriebswirtschaft, 74(9), 905-931.

### Responsible for module:

**First name:** Marco, Prof. Dr.

**Name:** Wilkens

**Email:** marco.wilkens@wiwi.uni-augsburg.de

### Lecturer:

#### 1. Lecturer:

**First name:** Marco, Prof. Dr.

**Name:** Wilkens

**Email:** marco.wilkens@wiwi.uni-augsburg.de
### Lecturer:

<table>
<thead>
<tr>
<th>First name:</th>
<th>René</th>
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<tbody>
<tr>
<td>Name:</td>
<td>Weh</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:rene.weh@wiwi.uni-augsburg.de">rene.weh@wiwi.uni-augsburg.de</a></td>
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### Courses:

1. **Course:**
   - **Type:** Lecture
   - **Name:** Financial Engineering and Structured Finance
   - **Weekly hours per semester:** 3

2. **Course:**
   - **Type:** Exercise
   - **Name:** Financial Engineering and Structured Finance
   - **Weekly hours per semester:** Exercises are integrated into the lecture

### (Recommended) audience:

1. **Program:**
   - **Name:** MSc Finance & Information Management (FIM)

2. **Program:**
   - **Name:**

3. **Program:**
   - **Name:**

4. **Program:**
   - **Name:**

5. **Program:**
   - **Name:**